

In This Issue...

COVER FOCUS

Year In Review

What have been the biggest IT newsmakers and issues of this year when it comes to mergers, data center management, and other key issues? Find out inside.

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Companies To Watch

We highlight four companies we think are worthy of your data center's attention. See page 25.



PHYSICAL INFRASTRUCTURE

- Chloride ManageUPS CIO alerts staff to UPS issues no matter where they may be page 6
- Product Spotlight: Portable Cooling..... page 14
- Taking control of the cables that flow from patch panels to equipment might seem like a minor consideration at times, but proper labeling and documentation can minimize disruptions and wasted time..... page 16

NETWORKING & VPN

- Product Spotlight: Server Virtualization page 18
- Napatech's NT20E is a 2 x 10Gbps PCI-E adapter that offers data capture, processing, and delivery of network data traffic with almost no CPU load page 20
- Computers need ongoing management—much of which consists of performing the same task on a regular basis. One vendor helping companies with this management is ScriptLogic page 21
- The American Registry for Internet Numbers says that Internet Protocol version 4 addresses will run out sometime in 2012. Will that mark the end of the Internet as we know it? page 22
- The MultiModem rCell, manufactured by Multi-Tech Systems, is an intelligent, ready-to-deploy cellular router designed for commercial applications..... page 23
- In many cases, surging demand for video, voice, and data applications often saps resources and clogs pipes before network managers have time to react. However, there are actions admins can take to improve bandwidth management without spending extra money page 24

STORAGE

- Qstar writes the software that runs optical and tape drives and partners with manufacturers for optical libraries and tape..... page 30
- Dare County Schools escaped Hurricane Isabel without damage, but the realization that a lot of important files could have been lost motivated it to invest in the STORServer K12 Appliance page 31

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The Year In IT

A Look At What Made Headlines In 2009

by Elizabeth Millard

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THANKS TO THE PACE of technology, IT shifts are always fodder for news stories, from the ouster of tech executives to product announcements that indicate future directions. Here's a look at some of the top stories of the past year.

The Sluggish Economy

It was difficult to go even a few days without a news story related to the squishy-soft economy, from our predictions about

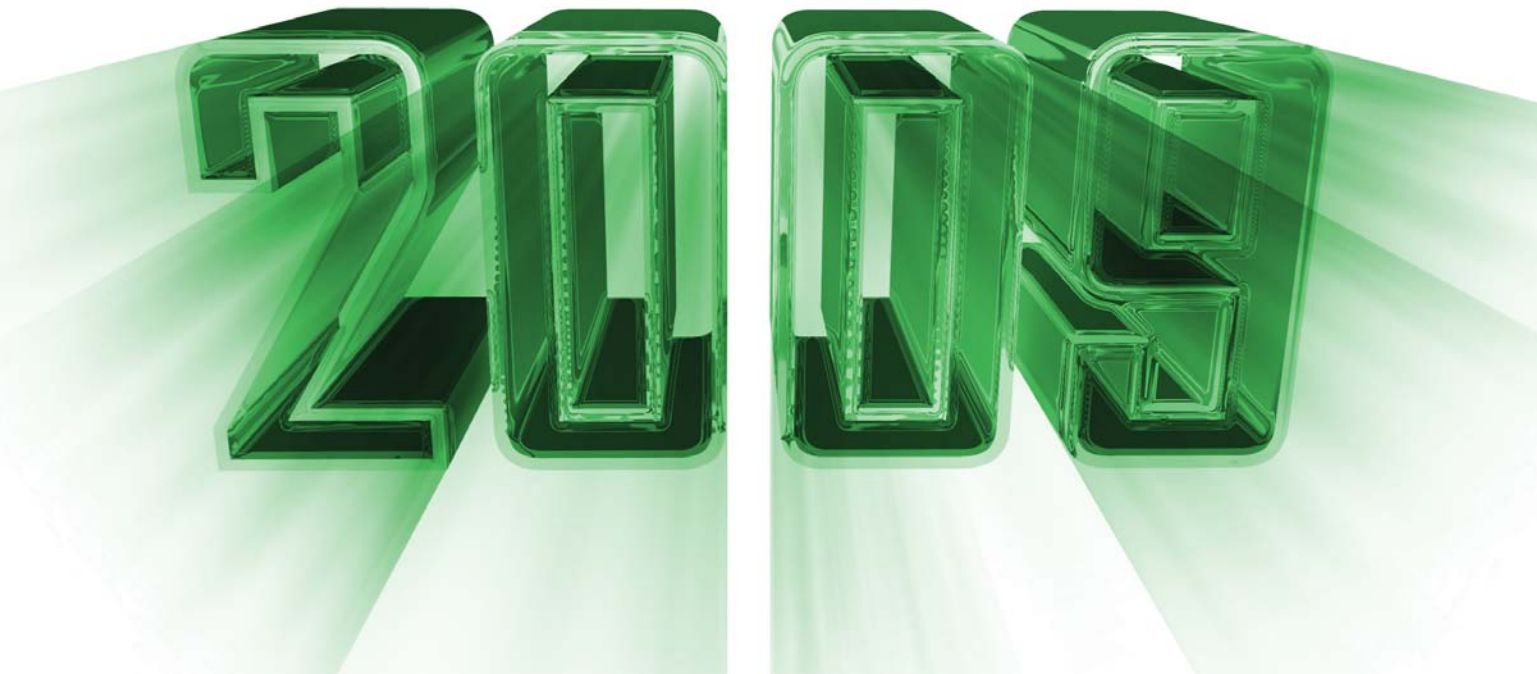
tech unemployment to feature articles about doing more tech support with a shrinking budget.

Although large-scale layoff tales seem to have slowed, there were still many belts getting tightened. According to the TechCrunch layoff tracker (www.techcrunch.com/layoffs), technology firms that have cut payroll numbers include EA, Microsoft, Real Networks, Sun Microsystems, Cisco, and Intuit. Even online invitation site Evite trimmed its already-small workforce by 35% in July.

The tough times do have a spark of optimism, however. In early December, Robert Half Technology released a report noting that nearly 50% of CIOs surveyed were confident their companies will invest in IT projects in the first quarter of 2010.

According to Dave Willmer, executive director of Robert Half Technology, managers are starting 2010 with revamped budgets and appear ready to start carefully expanding their IT departments once more after months of slow hiring activity.

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Microsoft Office In 2010

Is Your Enterprise Ready For The New Version?

by Chris A. MacKinnon

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THE NEXT VERSION of Microsoft Office, code-named Office 14, otherwise known as Microsoft Office 2010, is coming down the pike and is expected to arrive around the first half of next year. But several Web 2.0 companies are offering attractive alternatives to Microsoft's popular productivity suite. Be that as it may, Microsoft has made

many changes to compete with its rivals, and here we'll give you a rundown of the newest features and tell you how your small to midsized enterprise can get ready for the switch from previous versions.

In & Out

First off, if you're used to using Microsoft Office Small Business Edition

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Key Points

- Microsoft makes Office 2010 compatible with the Web by moving to the cloud in the latest release with free, stripped-down Web browser versions of Word, PowerPoint, Excel, and OneNote.
- Office 2010 is visually different from Office 2003, so just as users going directly from WinXP to Win7 will have to get used to a new interface because they didn't use Vista, Office 2003 users will face a challenge in getting used to the Ribbon interface.
- Many organizations are thinking of deploying Office 2010 along with their Win7 deployments, which is probably a good idea if the Windows project is planned for 2011.

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☐ Weekly ☐ Quarterly
☐ Bi-weekly ☐ Annually
☐ Monthly ☐ No Involvement

STORAGE (CONT.)

■ Iron Mountain has specialized in **storing and protecting information** for organizations since it first opened for business in 1951 page 32

■ In addition to bringing important data into and out of the company, **email transports malware, adware, spam, and other assorted ills** right to the desktop. Fortunately, most of these issues are relatively easy to deal with through the application of a little training and a good dose of common sense page 33

■ **Product Spotlight: Antispam Appliances** page 34

■ **Social networking sites** open up a lot of opportunities for SMEs, but at the same time, they also open up a lot of security holes. The need, then, is to develop a security approach that leaves room for the rewards without inviting undue risk page 36

■ **Product Spotlight: Blade Servers** page 38

■ Many people make the mistake of approaching **mainframes** with the mindset of a conventional x86 buyer, wanting a full list of I/Ops and other traditional server benchmarks for comparison page 40

■ The next version of Microsoft Office, **Microsoft Office 2010**, is coming down the pike, and we'll give you a run-down of the newest features and tell you how your small to midsized enterprise can get ready for the switch from previous versions..... page 1

■ As with any application testing process, the plan for **deploying Windows 7** in your company is part preparing, part categorization, and part testing page 41

■ Datawatch Monarch **data mining and analysis tool**
that extracts data from reports and transforms it into
usable data page 41

■ IBM's focus today is on **enterprise business services**, anchored by its software- and services-led business model page 42

■ For enterprises setting up a new data center, renovating their existing one, or just moving around equipment, **careful planning** is a necessity in order to avoid frustrating and sometimes costly mistakes page 43

■ In the face of unrelenting demand, what's a beleaguered IT executive to do? Return to **business growth**, according to some analysts page 44

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News

Recent research from Gartner suggests that energy, space, and technology problems will be thorns in IT managers' sides in 2010. The research shows that energy costs are the fastest-rising cost element, so Gartner says that IT managers need to establish a standardized method to understand the primary costs of the data center, such as a chart of overall costs and key categories. Gartner also suggests that IT managers should rationalize hardware by removing underutilized or old systems while workloads are shifted to newer, more efficient hardware. Measuring energy efficiency via advanced monitoring, modeling, and measuring techniques should also be made a priority.

The Federal Communications Commission has asked broadcast TV stations to catalog the parts of the spectrum they need in order to operate. The request for information is part of an effort to eventually free up “white space” bandwidth for commercial uses such as wireless broadband services. According to the public notice released by the FCC, “This inquiry takes into account the value that the United States puts on free, over-the-air television, while also exploring market-based mechanisms for television broadcasters to contribute to the broadband effort any spectrum in excess of that which they need to meet their public interest obligations and remain financially viable.”

In an ambitious statewide effort to combat global warming, California has announced new rules for its cap-and-trade plan. The plan is part of an overall move in the state to cut CO₂ emissions,

Recovery and transformation will be the dominant themes in IT and telecommunications over the next year, says IDC in a recent report of predictions for 2010. On the recovery side, IDC predicts that spending levels may resemble those of 2008. The firm also expects that global IT spending will increase 3.2%, with greater than half of the growth taking place in emerging markets. The transformation part of the equation relates to the recession's pressure on the enterprise to develop new technologies and business models, efforts that should bear significant fruit in 2010. The most prominent shifts will relate to mobile technology and cloud computing.



At a recent Web 2.0 Expo in New York, Beth Noveck, federal deputy CTO for open government, spoke with Tim O'Reilly about government transparency. During the interview, Noveck stated a need to establish policies and standards, including looking at health IT standards and what the open government policy should be. Noveck also noted that privacy concerns, such as data in White House visitor logs, are an important consideration when considering what should be made public and how. For instance, some information may need to be cleared of Social Security numbers, addresses, and phone numbers.

This information provides a quick glimpse of current and historical stock prices and trends for 14 major companies in the technology market.

Company	Symbol	Year Ago	Nov. 24 \$	Dec. 10 \$	% change from previous issue
AMD	AMD	\$2.28	\$6.95	\$8.58	▲ 23.45%
CA	CA	\$17.45	\$22.04	\$22.72	▲ 3.09%
Cisco Systems	CSCO	\$16.99	\$23.74	\$23.94	▲ 0.84%
Dell	DELL	\$11.48	\$14.32	\$13.23	▼ 7.61%
Google	GOOG	\$315.76	\$583.09	\$591.50	▲ 1.44%
HP	HPQ	\$35.97	\$50.19	\$50.14	▼ 0.1%
IBM	IBM	\$82.20	\$127.93	\$129.34	▲ 1.1%
Intel	INTC	\$14.75	\$19.39	\$20.15	▲ 3.92%
McAfee	MFE	\$29.50	\$40.86	\$38.21	▼ 6.49%
Microsoft	MSFT	\$19.36	\$29.91	\$29.87	▼ 0.13%
Oracle	ORCL	\$16.84	\$22.14	\$22.59	▲ 2.03%
Red Hat Software	RHT	\$11.65	\$27.50	\$27.66	▲ 0.58%
Sun Microsystems	JAVA	\$4.09	\$8.51	\$8.52	▲ 0.12%
Symantec	SYMC	\$12.49	\$17.94	\$17.67	▼ 1.51%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

Senators Set Sights On Cell Phone Termination Fees

New legislation is cracking down on early termination fees by wireless carriers with specific regard to Verizon Wireless, a carrier that’s recently increased its cellular ETFs (early termination fees) from \$175 to \$350. Four senators have introduced the Cell Phone Early Termination Fee, Transparency, and Fairness Act to restrict early termination fees according to the phone’s price. Wireless providers will also have to prorate ETFs and inform customers about charges. Other major wireless carriers such as AT&T and Sprint have been under the same scrutiny. As a defense, carriers claim that fees save the company money if customers choose to end contracts early.



according to recent statistics from Net Applications. For November, IE finished with a 63.62% share of the Web browser market, which represents a new low for Microsoft in the Web browser space and is a 1% drop from the previous month and the third straight month that IE has lost ground. Mozilla’s Firefox improved its share by about 0.7%, moving up to a 24.72% total share. Apple’s Safari followed at 4.36%, with Google’s Chrome accounting for 3.93% and Opera’s primary and Mini browsers totaling 2.31% and 0.46%, respectively. For the week of Nov. 10, Net Applications reported that Firefox had acquired a 25.10% share, marking the first time it’s passed the 25% total. For the year, Chrome’s market share has climbed from 2.52% to its current mark.

Cybersecurity Overhaul Needed

According to a recent report from the Internet Security Alliance, organizations in both the public and private sectors should change how they look at cybersecurity. The report focuses on implementing President Obama’s cybersecurity strategy. Among the subjects broached in the report are advocating a focus on cybersecurity economics, educating business leaders about cybersecurity, and implementing new standards to combat cyber threats. The report notes that although children and teens often receive education about cybersecurity, the same is not always true for high-level executives.

AT&T Urging Customers To Use Less Wireless Data

As AT&T’s 3G network continues to penetrate the country and add more users, bandwidth demand is increasing to the point that the company is looking for ways to get its customers to use less wireless data. iPhone use appears to be a primary source of bandwidth issues, as AT&T is the sole carrier for the Web- and video-enabled device. The company is considering various solutions, including educating customers about data consumption and offering more tiered pricing based on use. AT&T is also planning to build more network infrastructure to better handle the data traffic.

Social Network & Bank Scams On The Rise

Cisco recently released its 2009 Annual Security Report and found that social media attacks and Trojans designed to steal personal data are on the rise and will prove to be a major problem in 2010. Social media sites such as Facebook and Twitter have recently been plagued by the Koobface worm, which tricks users into viewing what they think is a YouTube video but is in fact a link to a malicious download. Cisco estimates that Koobface has infected more than 3 million computers. In its report, Cisco also describes Zeus, a password-stealing Trojan responsible for \$100 million in bank losses. Cisco also noted that phishing attacks are declining, but spam is not, and Cisco expects the volume of spam to rise 30 to 40% in 2010.

Chi Mei Pleads Guilty To Price Fixing

As the sixth LCD manufacturer to plead guilty to charges of price fixing, Taiwan-based Chi Mei Optoelectronics will pay \$220 million in fines. The Department of Justice had been investigating CMO and other LCD manufacturing companies for accusations of price fixing and anticompetitive pricing activities. CMO will pay the fine over a five-year period and work with the DoJ in its continued antitrust investigation. Other manufacturers that have pleaded guilty include Epson Imaging Devices, Hitachi Displays, Chungwa Picture Tubes, LG, and Sharp.

Firefox & Chrome Continue To Gain Web Browser Market Share

Microsoft’s Internet Explorer continues to lose ground to Firefox in the battle for market share,

and fixed, is expected to grow commensurate with the number of Internet users.

Cisco Wins Tandberg Bid

Cisco’s bid to purchase Tandberg, a Norwegian-based videoconferencing manufacturer, has been approved by more than 90% of shareholders. Shares tendered combined with the shares Cisco already owns equal about 91.1% of total shares in Tandberg. The networking giant’s bid to take over Tandberg began in October when Cisco offered \$3 billion for the company; an overwhelming number of shareholders rejected that original deal, so Cisco upped the bid to \$3.41 billion. Shortly after Cisco announced the deal’s approval, the Department of Justice issued a request for additional information about the acquisition. Cisco intends to complete the purchase during the first half of next year.

Novell Reports Loss

Novell lost about \$257 million last quarter, compared to a loss of \$16 million a year ago. For the full year, Novell posted revenue of \$862 million, down from \$957 million a year ago. Revenue from Linux Platform Products was the bright spot during the fourth fiscal quarter and full year, up 14% compared to the same quarter last year and up 21% compared to the previous fiscal year. Novell President and CEO Ron Hovsepian says it was a challenging year in terms of revenue but that the company worked hard to “improve our cost structure, deliver innovative solutions, and expand our partner ecosystem.” The company had about \$983 million in cash, cash equivalents, and short-term investments at the end of the quarter.

Gartner: Server Market Stabilizing

Cautioning that “it is important to put the yearly declines into perspective,” Gartner Research Vice President Jeffrey Hewitt issued the research firm’s latest numbers on the worldwide server market. According to Gartner, worldwide server shipments for the third quarter were down more than 17% compared to a year ago, and worldwide server revenue was down 15.5%. However, Hewitt says, when compared to the second quarter, shipments were up 13.8% and revenues were up 10.2%. “That suggests that the market as a whole is showing signs of stabilization as we move toward the end of 2009,” he says.

Microsoft, Yahoo! Search Deal Finalized

After taking a longer time than expected to iron out the details, Microsoft and Yahoo! announced they have finalized the search and advertising agreement that they signed in July. The companies hope that the agreement will allow them to be more competitive with Google. As part of the deal, Yahoo! will use Microsoft’s Bing to power its search capabilities on its site and receive 88% of the revenue generated from traffic. Additionally, the deal will make Yahoo! the premium search-advertising sales force for both companies. Although the agreement is still under review by the U.S. Department of Justice, it is expected to close early next year.



Harvard Study Finds Technology In Hospitals Is Not Worth The Price

A Harvard Medical School study revealed that hospitals are not saving money by installing new computer systems. The study suggests installing hospital IT systems is costing the hospitals more money than it is helping doctors, nurses, or staff. Incentives from the federal government are planned for the healthcare industry in 2011, encouraging hospitals to invest in new technology such as electronic healthcare records. However, the Harvard study states that even the “most wired” facilities rate no better than other hospitals in quality, costs, or efficiency. The study collected data from 4,000 hospitals across the United States over a four-year period.

Upcoming IT Events

Are you looking to learn more about data center or IT topics? Network with some of your peers? Consider joining a group of data center professionals. If you have an event you’d like listed, please send an email to feedback@processor.com.

- JANUARY -
[AITP Washington D.C.](#)
Jan. 7, 6:30 p.m.
Alfio's Restaurant
4515 Willard Ave.
Chevy Chase, Md.
aitpwashdc.ning.com
.....
[Greater Wheeling AITP](#)
Jan. 13
Wheeling, W.Va.
www.aitp-wheeling.org
.....
[ISSA Upstate South Carolina](#)
Jan. 15
NuVox
301 N. Main St., Suite 5000
Greenville, S.C.
www.upstate-issa.org
.....
[AITP Southwest Missouri](#)
Jan. 19
Springfield, Mo.
aitpspringfield.org
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[ISSA St. Louis Chapter](#)
Jan. 19
St. Louis, Mo.
stl.issa.org
.....
[Oklahoma City AITP Chapter](#)
Jan. 19
Oklahoma City, Okla.
www.aitp.org/organization/chapters/chapterhome.jsp?chapter=40
.....
[AITP Northeastern Wisconsin Chapter](#)
Jan. 20, 4:15 p.m.
Holiday Inn Select
150 S. Nicolet Road
Appleton, Wis.
new.aitp.org
.....
[AITP Atlanta](#)
Jan. 21, 5:30 p.m.
Crowne Plaza Atlanta Perimeter NW
6345 Powers Ferry Road NW
Atlanta, Ga.
www.aitpatlanta.org
.....
[San Diego SQL Server User Group](#)
Jan. 21
San Diego, Calif.
www.sdsqslug.org
.....
[AITP Akron](#)
Jan. 26
Akron, Ohio
www.akron-aitp.org
.....
[ISSA Inland Empire](#)
Jan. 26
ie.issa.org
.....
[ISSA Baltimore](#)
Jan. 27, 4:30 p.m.
Sparta Inc.
7110 Samuel Morse Drive, Suite 200
Columbia, Md.
www.issa-balt.org
.....
[AITP California Southland](#)
Jan. 27
www.aitpcalsouthland.org

- FEBRUARY -
[Green Data Center Conference](#)
Feb. 2
University Of California San Diego
San Diego Super Computer Center
10100 Hopkins Drive
San Diego, Calif.
greendatacenterconference.com
.....
[AFCOM St. Louis "Gateway" Chapter](#)
Feb. 9
Schneider Electric Technology Center
807 Corporate Centre Drive
O'Fallon, Mo.
www.afcom.com/afcomnew/stlouis.html
.....
[Greater Wheeling AITP](#)
Feb. 10
Wheeling, W.Va.
www.aitp-wheeling.org

PRODUCT RELEASES

The *Processor* Product Releases section includes brief overviews of data center products.

All products listed have been released recently, so use this section to get up-to-date with what's new on the market and to find products you need.

Manufacturers:
Do you have a new product that data center/IT managers would be interested in learning about?
Send your press release or product information to press@processor.com.

CLIENTS

■ BMC Software BSM & Proactive Solutions

BMC Software announced several products designed to enable customers to establish a proactive and cost-effective IT operations environment. The products are part of BMC's BSM (Business Service Management) for Proactive Operations initiative. Products include the BMC ProactiveNet Performance Management solution; BMC BladeLogic Server Automation; BMC BladeLogic Client Automation; BMC BladeLogic Network Automation; BMC Atrium Suite, which supports the Operational Support Analytics best-practices-based approach; and BMC Application Discovery and Dependency Mapping.

■ Datacap FastDoc Capture

Datacap announced FastDoc Capture, a tool for automated indexing and recognition-based capture. FastDoc Capture is designed to combine scanning, document separation and identification, OCR recognition, automated validations, an intuitive verification panel, and integration with SharePoint or a universal output format for any ECM system. Features include simple setup; entry-level price point; and the ability to batch capture to departments, work groups, small and midsized organizations, and special back file conversion projects.



■ Datawatch Monarch Data Pump v10.5

Datawatch released Monarch Data Pump v10.5, its ETL (extraction, transformation, loading) and application integration solution. Version 10.5 includes compliance and auditing features and the ability to create an Excel spreadsheet containing original report data. It is also compatible with Windows 7. Other new features include various options with XLSX/XLSM files, such as embedding a digital signature, exporting data to PivotTables, and inserting document properties.

■ Eizo FlexScan T1721

Eizo unveiled a 17-inch touchscreen monitor, the FlexScan T1721. The monitor uses SAW (surface acoustic wave) technology for durability and to accurately detect touch input from a bare or gloved hand,



which makes it ideally suited for use in factories, clean rooms, and retail environments. Features include a native resolution of 1,280 x 1,024; contrast ratio of 1,000:1; horizontal and vertical viewing angles of 160 degrees; and Eizo's ArcSwing 2 stand, which offers 104mm height adjustment and 65-degree tilt. The FlexScan T1721 supports the 32-bit versions of Windows Vista and Windows XP.

■ InFocus IN5534, IN5304

InFocus announced the IN5534 and IN5304 HD business projectors. The projectors feature DLP technology from Texas Instruments and BrilliantColor and have brightness ratings of up to 7,000 lumens. The IN5534 and IN5304 feature a SplitScreen display option, are integrated with long-life lamps, and are designed to be virtually maintenance-free. InFocus says both models feature WUXGA (1,920 x 1,200) resolution, motorized lens shift and interchangeable optics for short throw to ultra-long throw projection, and customizable skins and cable management. The IN5534 has the option for a second lamp for redundancy.

■ Kyocera Mita America TASKalfa 300i



Kyocera Mita released the TASKalfa 300i, the company's latest black and white multifunction printer. In addition to printing 30ppm, it uses the company's patented long-life Amorphous Silicon drum, offers 600 dpi image quality, a 300,000-page preventive maintenance schedule, an 8.5-inch color touchscreen, full-color scanning, a USB host interface, 2GB of RAM, a 160GB hard drive, 500-sheet adjustable paper drawers, a 200-sheet multipurpose tray, 2,200-sheet maximum capacity, and optimization for Kyocera's HyPAS (Hybrid Platform for Advanced Solutions). The printer is priced at \$8,493 and comes with the company's KX Driver, PDF Direct Print, and Prescribe Solution for on-demand black-and-white document creation and output. Additionally, the TASKalfa 300i is IPv6- and IPsec-compliant.

■ Oracle Communications Billing & Revenue Management Release 7.4

Oracle launched the latest version of its Communications Billing and Revenue Management platform, which is designed to help enterprises of all sizes quickly get new products to market, bolster brands, and lower costs associated with customer care. The latest version, Release 7.4, features expanded pricing, billing, and invoicing functionality; enhanced data accessibility; and support for Oracle Application Integration Architecture for Communications, which provides Oracle Siebel CRM users capabilities for managing high-value offers and streamlining collections processes. Release 7.4 also features out-of-the-box integrations with Oracle Business Intelligence Publisher, Oracle Communications Services Gatekeeper, and Oracle Enterprise Manager.



■ Oracle PeopleSoft Enterprise CRM For Higher Education 9.1

Oracle released the latest version of its PeopleSoft Enterprise CRM for Higher Education software, which is a CRM platform ideally suited to the demands of higher education. Oracle's PeopleSoft Enterprise 9.1 for Higher Education is fully

integrated with PeopleSoft Enterprise Campus Solutions 9.0 and features a new Event Management module, which lets users plan and host virtual and in-person events and features support for online event registration, wait-listing, early bird pricing, and credit card integration. Release 9.1 also features a Service Center for Higher Education module that is capable of handling both IT and general campus issue resolution tasks.

■ Oracle PeopleSoft Financials & Supply Chain Management 9.1

Oracle announced the latest version of its PeopleSoft Enterprise Financials and Supply Chain Management software, which delivers improved business performance and enhanced user productivity and lowers the cost of ownership. Oracle's PeopleSoft Enterprise Financials and Supply Chain Management 9.1 features improved compliance and financial control automation, procurement policy enforcement, increased efficiency of order capture and returns, accelerated fulfillment and logistics execution, and improved operational coordination. The offering also features tools to enforce fiscal discipline and advanced support for Public Sector, Research, Staffing, and Government Contracting industry functions.

■ Oracle Real User Experience Insight 6.0

Oracle introduced the latest version of its Real User Experience Insight platform, which lets users monitor performance and usage of business applications in real time and is part of the Oracle Enterprise Manager product line. Oracle Real User Experience Insight 6.0 integrates with Oracle Enterprise Manager, and together the two applications can quickly identify and resolve user experience issues before they negatively impact operations. Version 6.0 features enhanced Accelerators designed to improve end-user monitoring and service-level management for Oracle Siebel CRM, the Oracle E-Business Suite, Oracle PeopleSoft Enterprise, and Oracle JD Edwards EnterpriseOne. Oracle Real User Experience Insight 6.0 also includes integrated performance diagnostics, full user session replay, customizable monitoring dashboards, and more.



■ Pervasive Software PSQL v10 SP3

Pervasive Software announced the availability of the PSQL v10 SP3 database for Windows 7. Ideal for small to medium-sized enterprises, the Pervasive PSQL v10 provides upscaled application performance, dependable long-term operation, self-tuning, self-optimized installation, and backward compatibility. It supports Windows Vista, Windows Server 2008, Linux distributions, 64-bit computing, and multicore processing. Other essential features include binary platform compatibility, Auto-Reconnect technology, high-performance Btrieve transitional API, and flexible architecture for relational data access control.

MESSAGING & TELEPHONY

■ Clearswift Web Appliance 2.0 & Email Appliance 3.0

Clearswift announced content-aware Web and security appliances called Clearswift Web Appliance 2.0 and Clearswift Email

Appliance 3.0. The solutions protect enterprises from spam, malware, viruses, phishing, and other attacks that could result in identity theft or data loss. Web Appliance 2.0 features URL filtering and an onboard



cache that improves Web-browsing performance. Email Appliance 3.0 features Personal Message Management, which removes IT admin bottlenecks.

■ Tandberg Management Suite

Tandberg introduced TMS (Tandberg Management Suite), a large-scale provisioning solution that lets enterprises quickly deploy Tandberg E20 personal videoconferencing phones and Tandberg Movi PC videoconferencing to thousands of employees. The scalable platform is designed to reduce the cost of ownership by eliminating the time involved to set up individual devices across large or geographically dispersed organizations. It provides administrators with visibility and control for carrying out key operations and monitoring onsite and remote video networks. TMS integrates with existing applications and third-party vendors to increase ROI. The Tandberg E20 is a business-quality personal videoconferencing device that allows for a fully integrated video experience. Tandberg Movi is a video collaboration tool that turns any PC into a mobile, high-definition videoconferencing system.

■ Zultys MXmeeting 4.1

Zultys released MXmeeting 4.1, a tool that provides Web conferencing, remote PC support, remote PC access, and Web seminar features. Version 4.1 includes Web cam video broadcast, remote printing, flash-based view-only client for improved meeting speed, an improved file transfer experience for remote support and remote access, and increased moderator control of attendee access and termination. MXmeeting 4.1 combines video, voice, desktop Web interaction, instant messaging, virtual meeting rooms, online presentations, file sharing, training, and demonstration tools into a single system. MXmeeting features a 150-port voice conference bridge with lecture mode as well as file upload to directly distribute files to conference attendees.

NETWORKING & VPN

■ Apparent Networks Cloud Performance Center

Apparent Networks unveiled its free online service, the Cloud Performance Center. This service helps IT managers make decisions about the top cloud service providers (including Amazon, Google, and GoGrid) by providing information on service levels. With CPC, IT managers can make an informed decision about which cloud service to choose. Additionally, both real-time and historical data is offered as well as network path performance for regions, including major cities in North America. The data is gathered and reviewed by PathView Cloud, a network management tool from Apparent Networks.

■ AVIcode Intercept uX 5.6

AVIcode announced Intercept uX version 5.6, a client-side monitoring tool designed to automatically detect application

PRODUCT RELEASES

problems from the end user’s perspective and provide detailed insight into the end-user experience. New features in version 5.6 include support for per-tenant data collection for multitenant applications, statistical tracing information, and support and usability enhancements. The enhancements are designed to improve business efficiency by improving customers’ ability to monitor the complete end-user experience from “keyboard to eyeball” and proactively address end-user concerns.

■ Berkeley Varitronics Systems YellowFin WiMAX Tablet Analyzer Software V1.30

Berkeley Varitronics Systems added several enhancements to its YellowFin WiMAX Tablet Analyzer aimed at individual preamble analysis. Enhancements include a CINR (Carrier to Interface-plus-Noise Ratio) vs. time display, multiple RSSI (Received Signal Strength Indication) filtering with averaging options, and multiple CINR filtering with averaging options. Additionally, the company has added a data comparison capability that adds a CINR/RSSI vs. time display.

■ Black Box 802.11n Wireless & ServSwitch DTX Extender Kit

Black Box announced that the Black Box Pure Networking Wireless family now comes with the 802.11n wireless standard. This family of products includes the 2T2R Wireless Router, the 2T2R Wireless Access Point, and the 2T2R Wireless USB Adapter. Additionally, Black Box introduced the ServSwitch DTX Extender Kit and Single-Head (DTX5001), which translates VGA or DVI-D signals to a connected VGA or DVI-D monitor. According to Black Box, this switch combined with your IP network sends KVM, audio, and USB 2.0 peripheral signals out hundreds of miles over a qualified network.

■ Clerity Solutions Clerity Map Editor

Clerity Solutions unveiled Clerity Map Editor. This application development tool is designed to present a GUI structure for the design, construction, and upkeep of former mainframe-based 3270 “green screens” on open systems. For rehosted mainframe workloads running in UniKix software environments, BMS (Basic Mapping Support) maps are supported, along with Clerity Map Editor and stand-alone BMS files. Additionally, BMS files associated with COBOL copybooks can be portrayed, changed, and produced on any Windows, Unix, or Linux-based system supporting a Java Runtime Environment 6.0 or greater.



■ Layton Technology AuditWizard PC 8.1

Layton Technology released Audit-Wizard PC 8.1, the latest version of its audit software. It provides full-view visibility of network assets and protects against security loopholes. The new dashboard and SNMP (Simple Network Management Protocol) audit function enhances the user interface experience. Further, SNMP discovers and audits routers, printers, switches, and hubs. Current AuditWizard PC customers under support audit may receive a free upgrade.

■ Lenovo SMC 2.0

Lenovo released SMC (Secure Managed Client) 2.0, a storage-based fleet management solution. It provides stronger security as well as better management capabilities. SMC 2.0 allows for better security and storage, as it is designed to restore a PC to

its original state when the computer has been turned off. The improved redundancy capabilities improve access to data by building duplicate connection managers. Additionally, users can assign an image to a specific PC, and the automatic storage array detection simplifies storage array management. ThinkCentre desktops using SMC 2.0 can support supplementary PC add-in cards and enjoy higher-quality VoIP applications, as well.

■ NetApp Rapid Cloning Utility 3.0

NetApp released Rapid Cloning Utility 3.0, which contains tools to assist customers with deploying and managing virtual desktops via VMware View 4. Rapid Cloning Utility 3.0 also supports VMware vSphere. NetApp says the release will let users simplify how they provision VMware systems and streamline business operations. The release installs as a plug-in for VMware vCenter Server and will let users replicate one image hundreds of times in minutes without exhausting additional storage. NetApp says Rapid Cloning Utility 3.0 also complements VMware View Composer-linked clones through advanced cloning abilities for individual desktops and manual desktop pools.

PHYSICAL INFRASTRUCTURE

■ Aten Technology 24- & 40-Port CAT5 IP KVM Switches

Aten released IP KVM switches for SMEs that come with multiuser remote access and collaborative messaging capabilities as well as support for audio. The 1U 40-Port CAT 5 IP KVM (KN4140v; \$7,199.95) comes with support for one local and up to four remote users. A 40-port model with support for one local and up to two remote users is also available (KN2140v; \$4,599.95). The 24-Port CAT 5 IP KVM (KN4124v; \$5,999.95) is 1U high and supports one local and up to four remote users. Also available is a 24-port model supporting one local and up to two remote users (KN2124v; \$4,099.95). The switches come preinstalled with the Control Center over the NET (CC2000) management software, which gives IT admins the ability to monitor and control all installed devices securely and remotely via a single Web portal.



■ Eaton Network Shutdown Module v3.20

Eaton announced version 3.20 of its Network Shutdown Module for Mac OS X Snow Leopard. The module gives Mac users control over any iMac, MacPro, or Xserve server running Snow Leopard and now functions with HID-USB-enabled Eaton UPSes in the Pulsar series. This provides automatic shutdown in case of an extended power outage that saves energy and protects data.

■ HP IP Console Switches G2 With Virtual Media & CAC

HP released its IP Console Switches G2 with Virtual Media and CAC (Common Access Card) support. This tool is designed to help IT personnel better manage their heterogeneous data center. The IP switch delivers remote access to numerous servers running a variety of operating systems when it is used in conjunction with the IP Console Viewer software. A removable drive or ISO image can be mapped remotely to an attached server or a remote office for application installations and upgrades using the Virtual Media feature. Additionally, the

Local Console User Interface offers menus for configuration, virtual media, display, and security and upgrades from the On Board Web Interface.

SECURITY

■ Accellion Encryption For Secure File Transfer

Accellion unveiled Accellion Encryption for Secure File Transfer, designed for safeguarding against data breaches and threats in both government agencies and enterprises. Accellion Encryption for Secure File Transfer meets the regulatory compliance standards for the HITECH Act and HIPAA. This release ensures that data in motion and at rest is protected against unauthorized access using 128-bit AES encryption. Paired with this is the FIPS 140-2 Level 2-certified appliance for secure file transfer. Accellion Secure File Transfer provides audit tracking and can transfer up to 20GB of encrypted files and folders.

■ Fortinet FortiMail-5001A & -2000B

Fortinet announced two additional products in the FortiMail family of message security appliances, the FortiMail-5001A and the FortiMail-2000B. The FortiMail-5001A is a chassis-based device in a blade form factor, features the highest capacity of any FortiMail product, and has the ability to inspect 1.1 million messages and manage 1.4 million emails per hour, and is equipped with load balancing support. The FortiMail-2000B is rack-mountable and features 2TB of storage (which is upgradeable to 6TB) and support for up to 50,000 users. Both products feature the FortiMail 4.0 operating system, which is designed to provide further messaging security and usability.

■ Secude Secure Login Client 5.0

Secude released Secure Login Client 5.0, which provides Windows 7 platform support. Secure Login provides secure Single Sign-On and total landscape encryption for SAP supporting a variety of authentication mechanisms, including Active Directory, LDAP, SAP-ID, RADIUS, RSA SecurID, SQL DB, and smart cards. Secure Login is integrated into SAP by making use of its SNC (Secure Network Communications) framework and by supporting SAP’s Cryptographic Library. Secude also provides its own cryptographic library, offering more advanced features. Secure Login is based on industry standards such as X.509 and Kerberos and supports all available SAP user interfaces, including SAPGUI, Enterprise Portal, Business Explorer, and Business Objects.

■ Tenable Network Security Log Correlation Engine 3.4

Tenable Network Security released Log Correlation Engine 3.4, which provides enterprises with file integrity monitoring, historic log processing, and event alerting with programmed response capabilities. Version 3.4 enables enterprises to deploy Unix and Windows Log Correlation Engine file monitoring agents to monitor files or directories for changes. Log Correlation Engine version 3.4 supports the ability to import older logs, and end users can move the files to the Log Correlation Engine, where the logs can be imported to the compressed archive of all logs and be normalized. Version 3.4 can also be programmed to respond to alerts by sending emails, syslogs, or performing other actions based on combinations of events.

■ Tenable Network Security Nessus 4.2

Tenable Network Security announced the latest version of its Nessus network security appliance. Version 4.2 features a Web-

based user interface that helps users better scan and manage results and store their results on the server. In the latest version, users can easily compare old scans to new to see any changes. Changes have been made to the way Nessus reports, as well. A new “.Nessus” file format has been issued, and a new HTML export format has been implemented. Changes were also made to the plugins as well as the engine. Nessus also provides builds for Fedora 12, Ubuntu 9.10, and Suse 10 Enterprise (32-bit).

■ Wipro Technologies Wipro Desktop Deployment

Wipro Technologies announced Wipro Desktop Deployment, an end-to-end desktop deployment tool that provides compatibility testing methodology for the migration of applications to the Windows 7 platform. Wipro Desktop Deployment is designed to help customers facilitate Windows 7 readiness and remediate gaps by leveraging Microsoft products and tools, such as the ACT (Application Compatibility Toolkit), Microsoft SQL Server, and the Microsoft Access conversion kit. Wipro Desktop Deployment offers Windows 7 migration and infrastructure optimization, security and management, help desk support, and a factory approach for application compatibility. It provides the functionality for inventory analysis, validation, remediation, design, and implementation processes of hardware and applications.

SERVERS

■ ETSec Managed Services - Cloud Services

ETSec has released its cloud services business line. The ETSec MS-Cloud Services (Managed Services - Cloud Services) provides the framework and source for sophisticated cloud-based data security service delivery. This service has been broken down into MS-PaaS (platform as a service) and MS-SaaS (software as a service). The former provides infrastructures for the fully hosted private cloud security and data delivery, and the latter offers services for the public cloud security application. The delivery of MSS (Managed Security Services), data delivery, and security application management are managed through the MS-Cloud delivery model.

SERVICES

■ StoredIQ Assessment Services

StoredIQ launched StoredIQ Assessment Services, designed to provide visibility into unstructured data across the enterprise. StoredIQ Assessment Services can discover and assess unstructured information across a range of data sources, including storage, email, archiving, content, document, and record management systems as well as remote desktop environments. StoredIQ is offering the following types of in-depth assessments, based on an organization’s specific requirements: Data Topology Assessment, Litigation Preparedness Assessment, Records Management & Retention Assessment, PII Risk & Compliance Assessment (PCI, GLBA, HIPAA, etc.), and Custom Assessment Services. Assessment services from StoredIQ also provide companies with a view of all their corporate data, which enables them to make informed decisions affecting data management initiatives.

STORAGE

■ Arkeia Software Virtual Appliance Free Use Edition

Arkeia Software released the Arkeia Virtual Appliance Free Use Edition for software backup and hardware operating

PRODUCT RELEASES

efficiency improvements. The Arkeia Virtual Appliance Free Use Edition is deployable in VMware ESX and ESXi virtual environments with room for large VM upgrades. Arkeia Virtual Appliance Free Use Edition components include one Arkeia Backup Server for VMware ESX or ESXi, two Arkeia Backup Agents, disk backup (250GB capacity), and tech support. Arkeia Virtual Appliance Free Use Edition is available free with a valid online registration.

Enhance Technology
EnhanceRAID TS800 Series

Enhance Technology released a desktop RAID storage system with RAID 6 and Web GUI management, the EnhanceRAID TS800 Series. Powered by an 80-PLUS rated PSU (a redundant power supply is optional), the TS800 Series is made up of four models, each with individual alternative connectivity interfaces, the TS800 IP



(GbE iSCSI), TS800 SC (U320 SCSI), TS800 SS (SAS), and TS800 FC (Fibre Channel). Each model has eight individually lockable, removable drive bays and broad RAID configuration support.

Fujitsu Eternus DX400 & DX8000

Fujitsu announced the availability of its Eternus DX400 and DX8000 disk storage systems. The DX400 is designed for mid-sized data centers and can scale up to 428TB. The DX8000 is specifically for enterprise-class scalability, with capacities up to 2.7 petabytes. Both models have an 8Gb Fibre Channel host interface and quad-core processors. Other features include Data Block Guard, which enhances RAID data protection. Advanced data copying and mirroring capabilities help protect against data loss, and 128-bit AES protects data from unauthorized access.

Nexsan SATABeast 84TB

The 4U SATABeast storage system from Nexsan has been updated to come with up to 84TB of capacity. The enterprise system, rated at more than 99.9% reliability, is suitable for backup, disaster recovery, and archiving, the company says. The SATABeast's AutoMAID (Automatic Massive Array of Idle Disks) feature provides power savings of up to 70%, Nexsan says. The storage system also features dual-function Fibre Channel and iSCSI connectivity with wire-speed performance as well as a Worldview single GUI interface. Pricing starts at about \$38,000.

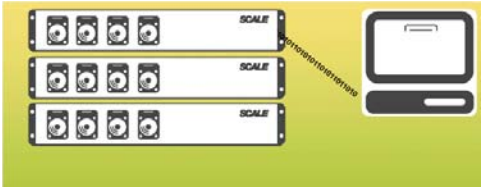
Rackspace Hosting Cloud Drive, Server Backup & Hosted Microsoft SharePoint

Rackspace Hosting announced products aimed at assisting enterprises with the move from IT applications to a cloud computing platform. The company says that Rackspace Cloud Drive, Rackspace Server Backup, and Hosted Microsoft SharePoint will help customers spend less time maintaining file servers, backup software, and other basic IT systems and focus instead on areas that drive revenue. Cloud Drive will let employees store and share files online, access and manage data remotely, synchronize folders via a cloud-based network drive, and protect data via AES 256-bit

encryption. Server Backup will let users manage data remotely from Mac, Windows, and Linux systems and protect data with AES 256-bit encryption.

Scale Computing
Intelligent Clustered Storage 2.0

Scale Computing announced its ICS (Intelligent Clustered Storage) architecture version 2.0. A flexible architecture, ICS 2.0 is intended to expand administrator control over a more convenient, cost-effective storage system. The company says ICS 2.0



offers enterprise-class features on commodity-based hardware in an all-active environment. It features support for snapshots and asynchronous replication, a streamlined interface, and migrationless scaling.

Seagate BlackArmor NAS 220, NAS 110, WS 110, PS 110

Seagate announced additions to its BlackArmor product line of external storage solutions, the BlackArmor NAS 220, NAS 110, WS 110, and PS 110. The BlackArmor NAS 220 and NAS 110 are network storage servers with up to 4TB and 2TB of storage, respectively. The BlackArmor WS 110 is an external drive for workstations, offering local storage with both eSATA and USB 2.0 connections. Finally, the Black-Armor PS 110 is a portable unit for business travelers. All feature SafetyDrill+ disaster recovery/backup software with 256-bit AES encryption.



StoneFly RAIDML

StoneFly revealed the StoneFly RAIDML for IP SAN data protection. The StoneFly RAIDML has the ability to supply RAID 5 or 6 protected volumes for multiple storage units. Supported by the StoneFly Stone-Fusion operating system, the RAIDML functions using a patented storage virtualization engine. Other features include StoneFly Reflection (mirroring), StoneFly Snapshot (data recovery), and Quick Sync for increased data protection.

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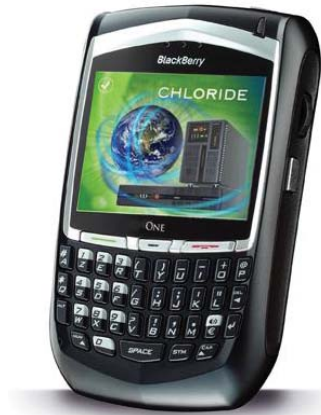
WHEN YOUR UPS needs to alert someone on your IT staff, time is of the essence. It means that there's a power problem, and downtime for the data center has become a serious risk. Immediate attention is required.

Of course, IT personnel are rarely tied to a desk. They may be on campus, or they might be on the road or at a branch office. Two things help them keep the home fires burning back at the office. One is Web access to the console governing the UPS. The other, instant notification from the UPS itself, is the key to timely intervention in the minutes before the backup power runs out.

That's where Chloride's ManageUPS CIO software comes in. The asset man-

agement and alarm monitoring app now has the ability to send concise but comprehensive email alerts to any mobile device, such as a BlackBerry or iPhone, when triggered by a threshold event, low batteries, or a power outage. ManageUPS CIO notifies staff about the number and identities of each UPS affected by the event, giving IT as much time as possible to address the problem with the means at their disposal.

Although Chloride Power sells UPSes, its ManageUPS CIO software is capable of SNMP monitoring of other brands of UPSes, too. The remotely accessible app can receive feedback from Chloride UPS and ManageUPS environment sensors, and it runs on Windows or Linux.



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- All Receptacles Monitored
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Metered Outlet - MRP

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The Year In IT

Continued from Page 1

He adds that many firms are investing in technologies that will improve their efficiency and competitiveness and that there’s demand for professionals to implement these projects, particularly in industries such as health care.

Product Revamps & Developments

The largest product launch came in the last quarter of the year: the mighty Windows 7, which Microsoft unveiled with flourish, hoping that enterprises would begin adoption at a steady clip. But as soon as it came out in October, some users began grousing about features that weren’t included, and some IT managers noted that they’d be sticking with Vista due to limited resources.

Some criticism from pundits about the system has included complaints about Windows 7’s limited cloud integration, security gaps, and performance slow-downs. But Microsoft has countered by touting the system’s unique features, such

as live taskbar previews, file grouping, better search capability, and higher organizational efficiency of programs and files.

Another major Microsoft contribution was Exchange Server 2010, released in early November. The email and collaboration server product promises new features and enhancements as well as archiving and compliance functions. According to Rob Sanfilippo, an analyst at the research firm Directions on Microsoft (www.directionsonmicrosoft.com), this release could prompt organizations that are still using Exchange 2003—still widely deployed, Sanfilippo notes—to upgrade.

Like every year, other technology companies trotted out product developments at a steady pace. For instance, Cisco released a breadth of services and programs for the midmarket recently, including enhancements to its security appliances, and HP expanded its thin client and desktop virtualization capability.

Look for more news in the future related to SMEs and products that cater to them—for example, Jeff Groudan, HP’s vice president of thin-client solutions for the desktop, notes that what’s kept enterprises from adopting desktop virtualization in the past

Biggest Newsmaker: Steve Jobs

Although a top executive’s illness is always cause for concern in a company, it’s not very often that the SEC comes in to investigate. But Apple underwent an inquiry after CEO Steve Jobs appeared gaunt and pale early in 2009 and then withdrew from the Macworld keynote speech and rumors began to circulate that Apple was trying to hide something.

The ensuing investigation highlighted the increasing scrutiny on executives at public companies, showing that the reverberations from malfeasance at firms such as Enron and Countrywide have changed the corporate landscape for good.

Jobs stayed in the news as rumors circulated about his health, his liver transplant, and his eventual return to Apple. Near the end of the year, *Fortune* named Jobs its “CEO of the Decade,” noting that Apple’s market capitalization has risen from \$5 billion in 2000 to about \$170 billion today. Many believe the company’s success emanates from Jobs’ belief that only a culture of creativity and innovation can foster corporate growth, but some analysts have noted that Jobs’ skills as a showman and salesman go a long way toward raising Apple’s profile, as well.

has been complexity and cost, but HP and other companies have been trying to address those issues with its new thin clients and virtualization products.

Patent Wrangles

In a soft economy, companies have a tendency to watch their patents more carefully, says Peter Coyle, president of law firm Larkin Hoffman Daly & Lindgren (www.larkinhoffman.com).

“One of the effects of the downturn is a focus on intellectual property, because people want to protect what they’ve got,” he says. “Some might try to shed assets, and licenses and intellectual property rights are part of that, so in general, you’re seeing a lot of news coming from this area.”

The past year was no exception, as law-suits seemed to ping across companies. For example, in October, Nokia filed a suit against Apple, alleging that the iPhone

infringes on 10 patents related to wireless data, speech coding, encryption, and security. A few weeks later, Apple filed a suit against Psystar for selling PCs with Mac OS X Leopard preloaded onto them.

Other suits included Microsoft suing GPS device maker TomTom, only to get countersued by the smaller firm; RIM (Research In Motion) getting hit with a suit by Klausner Technologies; and semiconductor maker Inphi suing memory module maker Netlist. No matter what the size of the firm, such suits can significantly impact a company, notes Coyle. For example, Netlist noted that since the suit, its shares had dropped 12%.

It’s likely that as the economy struggles to improve, more stories of patent infringement suits will continue to pepper the technology news, Coyle says, adding that “whenever you have development and intellectual property, you’ll have suits related to innovation.”

“One of the effects of the downturn is a focus on intellectual property, because people want to protect what they’ve got.”

- Larkin Hoffman Daly & Lindgren’s Peter Coyle

Microsoft Office In 2010

Continued from Page 1

and the Enterprise Edition, you should know that the company has decided to discontinue both. With Office 2010, you’ll find Home And Business, Professional, and Professional Plus versions, among others. One significant change, however, will see OneNote as part of all SKUs. The biggest changes to the suite are extended file compatibility, user interface updates, and a refined user experience. Microsoft is also adding a 64-bit version of Office for the first time, but only for Windows Vista and later OSes.

Microsoft’s main goal, according to Michael Silver, research vice president and distinguished analyst with Gartner, is to improve the collaboration features in the suite. Silver explains, “On a couple of fronts, they are addressing competition from Google. Google Docs is stronger in terms of simultaneous collaboration than Microsoft Office, and it runs in a browser. Google has garnered a lot of hype around Docs, both because it’s Web-based and free. On the other hand, Microsoft is way stronger in terms of content creation.”

If you’re wondering when Microsoft will make the suite compatible with the Web, it has indeed moved to the cloud in the latest release with free, stripped-down Web browser versions of Word, PowerPoint, Excel, and OneNote. Silver says Microsoft adds real-time collaboration. He adds, “For organizations that want to host their own Web version and host their own files, Microsoft will offer that option, while Google Docs can only be hosted by Google with the documents hosted in Google’s cloud. As for the free, Web-based version of Office, the files will live in Microsoft’s cloud on each user’s Live SkyDrive.”

Silver does point out that the self-hosted version will not be free, but pricing has not yet been announced. He adds, “Most organizations do not want their data living in Microsoft’s cloud. The really big change with Office 2010 is the increasing importance of SharePoint Server. For both simultaneous collaboration and the Web version, SharePoint is required. This is the first version of Office that requires SharePoint to use all the Office features.”

What’s New

At first glance, there is very little new from a user’s perspective, says Bob Kelly, senior product manager at KACE (www.kace.com). “After the considerable change to the user interface with the previous release, this will probably come as a relief for many. However, it is much different than Office 2003, so just like those that are [...] moving from WinXP to

Windows 7, there is definitely a learning curve in getting used to the Ribbon interface coming from Office 2003 forward.”

Kelly says a majority of the changes seem fairly minor and may make pushing an upgrade from 2007 to 2010 a questionable endeavor. He says there are some new features around photo editing and video controls and improved integration with Office Communication Server 2007. He adds, “There are some smaller features, too, like the new paste preview feature that lets you see how formatting choices will look before executing the change (rather than having to try it and see, then undo and try another option).”

However, in keeping with updated collaboration, perhaps the most changed application in the new suite, with the addition of several features, is Outlook. For example, if you use the suite on Win7, you can drag a file from an application’s Jump List to the Outlook window and that file will appear in a new message window. You can also right-click the Outlook icon on the Windows Taskbar and a list of common tasks appears,

giving you the opportunity to quickly create a new mail message, among other choices. These slight changes will come in handy for busy users.

If you’re on the run, either inside or outside the enterprise, you will now be able to synchronize your text messages to your inbox and then reply to them directly from Outlook on your PC, using Windows Mobile 6.1-based phones. What’s more, voicemails will also be able to be converted to text and, in turn, sent as an email—another change that will be useful for busy enterprise staff. And if you found yourself scrolling and searching for messages that were related to each other in previous versions, take heart; in 2010, you will be able to combine and thread email messages from the same email address together.

Get Ready

So what can your enterprise do to prepare for Office 2010? Silver says for starters, organizations that are on Office 2003 or previous versions need to consider their long-term roadmap for Office. He elaborates, “Organizations skipping Office 2007 may need to deploy Office 2010 so they stay supported. There will likely be another version of Office in the 2013 timeframe, about 12 months before support for Office 2003 ends. Organizations running Office XP will lose support in 2011 and support is already over for Office 2000.”

Silver says training has been the big issue with Office 2007, and for organizations with 2003 or prior, some user training will be required. He notes, “Many organizations are thinking of deploying Office 2010 along with their Windows 7 deployments, which is probably a good idea if the Windows project is planned for 2011.” He says organizations planning to start their Win7 deployments in 2010 may not have Office 2010 delivered and tested in time.

Office 2010 System Requirements

“If Office 2007 ran on your computer, you’ll have no problems with Office 2010,” says Bob Kelly, senior product manager at KACE (www.kace.com). He says that although there were early rumors that Office 2010 would be available only for 64-bit systems, that is not the case. Office 2010 runs on 32-bit and 64-bit systems with WinXP SP3 or later.

To run Office Professional Plus 2010, you’ll also need:

- Computer and processor:** 500MHz processor
- RAM:** 256MB
- Hard Drive:** 3GB
- Display:** 1,024 x 768 resolution
- Other:** Microsoft Windows Media Player 9.0, Microsoft DirectX 9.0c, Microsoft Active Sync 4.1, Microsoft Windows Desktop Search 3.0

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Upcoming IT Events

For more Upcoming IT Events, see page 3.

- AITP Washington D.C.**
Feb. 11, 6:30 p.m.
Alfio's Restaurant
4515 Willard Ave.
Chevy Chase, Md.
aitpwashdc.ning.com
.....
- AITP Southwest Missouri**
Feb. 16
Springfield, Mo.
aitpspringfield.org
.....
- ISSA St. Louis Chapter**
Feb. 16
St. Louis, Mo.
stl.issa.org
.....
- Oklahoma City AITP Chapter**
Feb. 16
Oklahoma City, Okla.
www.aitp.org/organization/chapters/
chapterhome.jsp?chapter=40
.....
- AITP Northeastern Wisconsin Chapter**
Feb. 17, 4:15 p.m.
Holiday Inn Select
150 S. Nicolet Road
Appleton, Wis.
new.aitp.org
.....
- AITP Atlanta**
Feb. 18, 5:30 p.m.
Crowne Plaza Atlanta Perimeter NW
6345 Powers Ferry Road NW
Atlanta, Ga.
www.aitpatlanta.org
.....
- ISSA Upstate South Carolina**
Feb. 19
NuVox
301 N. Main St., Suite 5000
Greenville, S.C.
www.upstate-issa.org
.....
- AITP Akron**
Feb. 23
Akron, Ohio
www.akron-aitp.org
.....
- ISSA Baltimore**
Feb. 24, 4:30 p.m.
Sparta Inc.
7110 Samuel Morse Drive, Suite 200
Columbia, Md.
www.issa-balt.org
.....
- AITP California Southland**
Feb. 24
www.aitpcalsouthland.org
- MARCH -**
Greater Wheeling AITP
March 10
Wheeling, W.Va.
www.aitp-wheeling.org
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March 16
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aitpspringfield.org
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- ISSA St. Louis Chapter**
March 16
St. Louis, Mo.
stl.issa.org
.....
- Oklahoma City AITP Chapter**
March 16
Oklahoma City, Okla.
www.aitp.org/organization/chapters/
chapterhome.jsp?chapter=40
.....
- AITP Northeastern Wisconsin Chapter**
March 17, 4:15 p.m.
Holiday Inn Select
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Appleton, Wis.
new.aitp.org
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- AITP Atlanta**
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COVER FOCUS

Who Bought Whom?

A Look At 2009's Mergers & Acquisitions

by Carmi Levy

AFTER A DECADE of blockbuster deals that rewrote the technology vendor landscape and drove historically high levels of scale and integration, things cooled off in 2009 as companies instead focused on survival.

"In the past, you'd generally see more big deals in any given year," says Andrew Bartels, vice president and principal analyst with Forrester Research. "We haven't seen that many big deals in 2009. The big story here is not so much the acquisitions that were made, but the acquisitions that weren't."

Describing this past year as a "down period for the tech industry," Bartels says 2007 and 2008, which saw SAP acquire Business Objects, IBM acquire Cognos, and Oracle take over BEA, were much more significant in their impact and scope. Bartels says the relative quiet of the past year is likely due to two primary reasons, namely that after years of acquisitions there simply aren't many large targets left and that the industry itself is undergoing fundamental change.

"In a number of ways, the industry has already gotten consolidated down to the point that further consolidation starts to run into antitrust issues," says Bartels. "For example, if HP had acquired Sun or Microsoft had acquired SAP, that would have invited all kinds of antitrust investigations."

This likely explains, adds Bartels, why Oracle may have had an easier time avoiding antitrust scrutiny in its Sun purchase. Acquisition of a dissimilar company—in this case, a software firm buying a hardware one—raises fewer regulatory alarms. The changed economic landscape may also be another dampening factor.

"We're kind of at a turning point in the market, and it's not yet clear what the strategy will be in this new era," says Bartels. "Is the winning strategy going to involve being consolidator of slow growing markets? Or will it be to build out a broader horizontal portfolio?"

Bartels says the latter approach may not make much sense as vertical solutions become more central to market growth. This change may push companies on the hunt to look vertically and buy up and down the supply chain to build more complete solutions for a given industry.

"There's definite hesitation regarding which direction companies may want to leap," says Bartels. "Some of them may be waiting a bit to see what the landscape looks like and which angle to play before they jump."

Even so, the relatively few acquisitions announced in 2009 will give data center managers continued opportunity to question their acquisition and vendor management strategies.

Some of the key deals announced over the past 12 months include:

Oracle Buys Sun Microsystems
When: April
How Much: \$7.4 billion



Beyond the obvious lure of an established hardware business, Sun was an attractive target for Oracle because of its legacy in open source and Java middleware.

"It's an acquisition of a hardware vendor by a software vendor, so in that sense, much of what Sun is remains intact," says Bartels. "Nevertheless, it still faces all the challenges and issues that any major server manufacturer faces today, namely the dramatic impact of virtualization and cloud-based computing on server utilization. This trend is eating away at demand for classic servers."

Others are less complimentary. "This year's tech acquisitions mean nothing but confusion and lack of choice for the average IT or data center manager," says Bill Roth, CMO at LogLogic (www.loglogic.com). "The Sun/Oracle merger is the scariest of all. It essentially will mean the end of the Sun hardware brand. It will take Oracle at least two years to figure out what to do."

However, whether the acquisition is a good move for Oracle may not even matter, as the deal is pending approval by the European Commission as it investigates the merger's antitrust implications.

Dell Buys Perot Systems
When: September
How Much: \$3.9 billion

Although Dell thrived when leveraging manufacturing and distribution economies of scale to deliver commoditized hardware to horizontal markets, the increasing success of more focused vertical solutions has exposed the weakness of Dell's model. The Perot Systems acquisition is the company's latest effort to bolster its services capability.

"The more interesting aspect of this acquisition could be what it may allow Dell to do in terms of pursuing a vertical industry strategy, especially in health care," says Forrester's Bartels, who says Perot lets Dell more easily offer the kinds of consolidated medical practice solutions demanded by this unique market. Pre-Perot, Dell would have been hard pressed to combine the hardware with the necessary imaging infrastructure and high-touch service and support. Still, this move may have a downside.

"Dell's purchase of Perot seems risky because the models are completely different," says Evan Powell, CEO of Nexenta (www.nexenta.com). "Dell is trying to go 'up the stack' by adding consulting services

to their business. But Dell traditionally has a radically different go-to market and a different strategy. It is a little late for Dell to try to mimic IBM."

IBM Buys SPSS
When: July
How Much: \$1.2 billion

The growing demand for analytics lies at the root of this deal as post-recession companies look for ways to identify and exploit latent value in data that's been accumulating in their ERP systems.

"This is more a case of IBM bulking up its presence in analytics," says Bartels. "SPSS is one of the ways it can most easily and quickly increase that presence."

Cisco Buys Tandberg
When: October
How Much: \$3.4 billion

Videoconferencing has emerged as one of the strongest-performing technologies during the current downturn. Companies looking to slice their travel budgets have accelerated investment in these travel-avoiding, collaborative solutions. Tandberg, in particular, has performed well.

"At a time when most communications equipment vendors, including Cisco, have seen declines, Tandberg has managed to keep growing," says Bartels. "Cisco is already big in videoconferencing, but this acquisition lets it increase its presence that much more." [P]

Other Notable Acquisitions

In addition to the Oracle/Sun, Dell/Perot, IBM/SPSS, and Cisco/Tandberg transactions, the following deals also made headlines through the year and will continue to change data center management thinking into 2010 and beyond:

- HP's acquisition of 3COM for \$2.7 billion
- EMC's purchase of Data Domain for \$2.1 billion
- VMware's buyout of SpringSource for \$420 million

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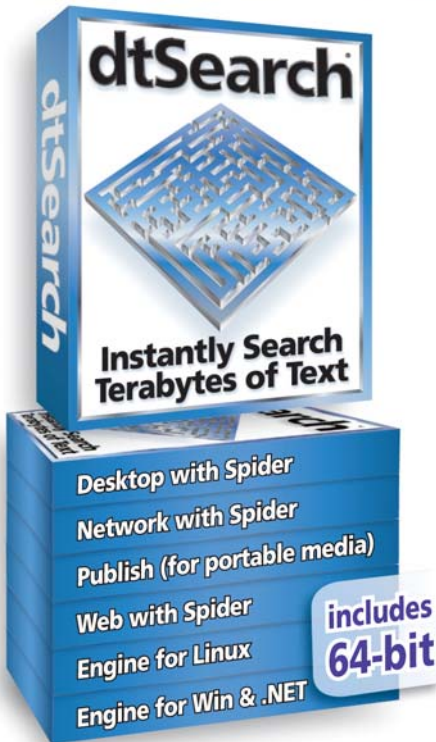
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U.S. AIR FORCE

U.S. Air Force Extends Supercomputer Research

The U.S. Air Force will purchase 2,200 PlayStation 3 gaming consoles to add to its current cluster of 336 PS3s used for supercomputing. The Air Force Research Laboratory in Rome, N.Y., will be using the cluster of PS3s to power their supercomputers that help to test new technology, such as high-def video processing and neuromorphic computing. Although there are more powerful cell-based processors available, the gaming consoles have similar potential and are a fraction of the cost. The Department of Defense granted \$2 million to fund the research; the PS3s are expected to cost \$650,000. Researchers expect the new group of PS3s to be ready for use in May or June.



Lenovo To Buy Back Mobile Communication Technology Unit

The Lenovo Mobile Communication Technology unit will once again be a member of the Lenovo family following a decision by the company to buy back the unit, which it sold in 2008. Lenovo says the purchase, which will cost Lenovo about \$200 million in cash and stock shares, is a signal that the company is “gearing up its efforts in the burgeoning mobile Internet market in China.” Lenovo Mobile currently is third in the Chinese mobile handset market, Lenovo says. Lenovo sold the unit to a group of investors led by Hony Capital, the private equity arm of Legend Holdings, for about \$100 million. Lenovo says analysts predict the Chinese mobile Internet market will exceed \$16 billion by 2014 due in part to the quick evolution of 3G mobile broadband and related multimedia Internet services. “With Lenovo’s brand, strong channel, and excellent operation platform, we’re confident in our ability to execute our mobile Internet strategy and make it our next growth engine after the China business,” says Yang Yuanqing, CEO of Lenovo.

AT&T, Verizon Call A Truce Over Ad Dispute

Competing wireless providers AT&T and Verizon Wireless have agreed to drop suits filed against each other in a dispute concerning ad campaigns. The companies have been butting heads over Verizon’s recent “There’s a map for that” ads, which AT&T claims are misleading and imply that its non-3G data coverage is insufficient; Verizon says it clearly states in the commercials that the map displayed is for AT&T’s 3G coverage only. After a judge in a Georgia District Court denied AT&T’s request to have the ads pulled, AT&T decided to drop its suit, and Verizon soon dropped its suit against AT&T’s “more bars in more places” ads.

by Christian Perry

• • •

AS A YEAR DESTINED to be remembered primarily for its bitter, unforgiving economy, 2009 inevitably held promise behind the plummet. Perhaps more than ever, data centers found themselves seeking technologies that delivered more for less—less money, less space, less hassle. That shift continues to ignite a gradual change in IT that could serve as the foundation for IT generations of the future.

“We think the trends in 2009 reflect a combination of emerging technologies and the point we are at in the economic cycle,” says Philip Garland, leader of CIO advisory services at PricewaterhouseCoopers (www.pwc.com). “All of these developments were highly significant in 2009 and will continue to be in 2010. A ‘meta challenge’ facing many companies is when it will be safe again to make some big IT bets that define an investment in the future.”

A Virtual Lock

No technology, product, or strategy had more of an impact on IT in 2009 than virtualization, which grew from a viable concept in previous years to a necessity in 2009. Virtualization long held bucketsful of promise for small and midsized data centers, but the economy finally pushed many to finally take the plunge in the past year.

“Virtualization met the needs of companies looking to go green and cut costs in a down economy,” says Lior Blik, CEO of Network Infrastructure Technologies (www.nitconnect.net). “With virtualization, hardware costs can be significantly consolidated and planning a disaster recovery solution simplified. Virtualization also made it possible for IT departments to spend less time troubleshooting a problem and more time implementing the solution.”

How extensive was virtualization’s impact? According to Blik, who is also the CIO of Hoboken University Medical Center, the technology made it possible for organizations to reduce their data centers from entire rooms full of equipment to a few servers and cabinets. Virtualization also extended beyond the server realm, notes Kris Domich, principal consultant at Dimension Data (www.dimensiondata.com), who points to a marked rise in virtual desktop discussions and implementations in 2009.

“We saw a number of positive impacts, including noticeably lower energy costs, largely due to the fact that the terminals used for virtual desktops use about one-quarter of the amount of power consumed by a typical desktop workstations,” Domich says. “We also saw that PC refresh costs were lower, because refreshing a desktop with a terminal could be done at less than half the price of a typical desktop refresh while achieving the same functionality.”

The Cloud Rises

Although the cloud and related SaaS (software-as-a-service) technologies gathered significant steam in previous years, 2009 marked a watershed for the space, with organizations seeking Web-based services to help save on hardware and personnel costs. Instead of potentially breaking an already dwindling budget on

new servers—and in turn consuming precious data center floor space—organizations dove into a cloud market that was teeming with flexible, highly affordable services that promised to satisfy almost any need.

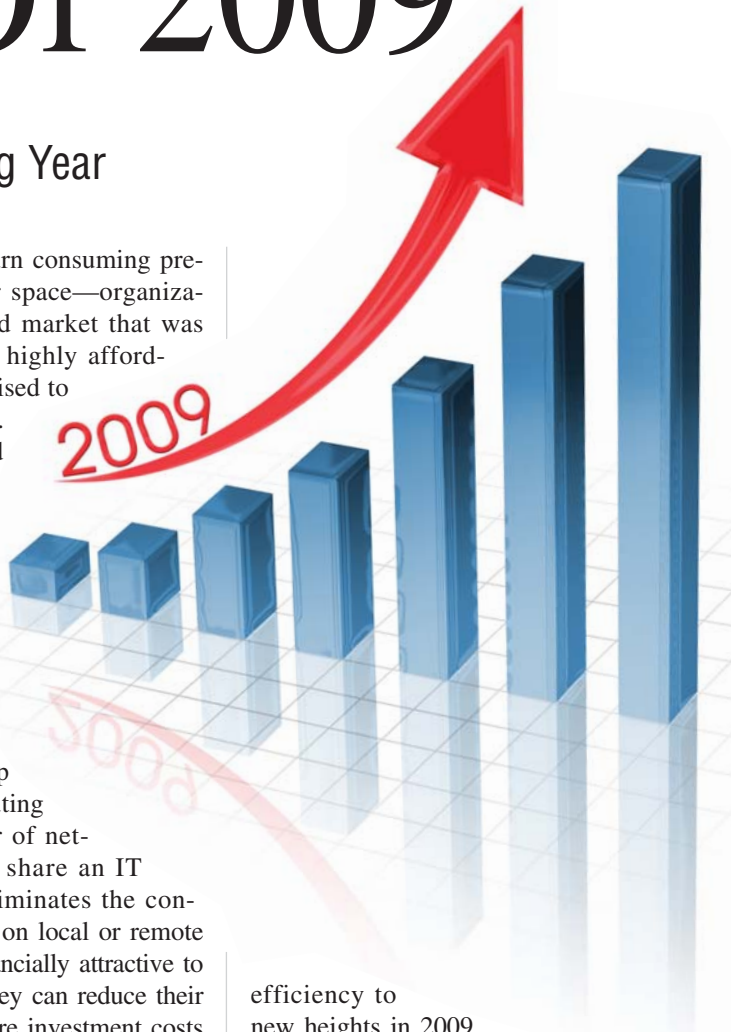
“The growth of cloud computing has allowed even the smallest organizations to access enterprise-class technology with minimal up-front costs and easy scalability,” says Todd Thibodeaux, president and CEO of CompTIA (www.comptia.org). “Cloud computing allows a large number of networked computers to share an IT infrastructure. That eliminates the constraints of relying only on local or remote computers. It’s also financially attractive to many organizations—they can reduce their in-house IT infrastructure investment costs and use Web-hosted services, paying only for what they use.”

However, despite that promise shown by cloud services in 2009, questions around the cloud’s ability to deliver on a secure and consistent basis remain. Vendors are quick to hype the cloud as the ultimate answer to many of IT’s woes, but outages suffered by Google, Rackspace, and others served to remind customers that cloud reliability has room to improve.

“I worked with a lot of people struggling with managing expectations and trust issues related to the cloud,” says Warren Arbogast, founder and president of Boulder Management Group (www.bouldermanagementgroup.com). “A lot of non-IT executives tend to see technology as ‘magic.’ . . . So, the thought carries out: Why do we even need our own data center stuff? Let’s just put things out in the cloud. Well, of course, we know it isn’t that easy.”

Green Gets Mean

For those data centers that did leap into the cloud in 2009, they helped contribute to another trend that gained major traction in 2009—the green movement. Arbogast notes that traditional ways of doing IT—those sustained by plenty of money—fell by the wayside in late 2008 as the economy worsened, helping to propel green IT and energy



efficiency to new heights in 2009. Other big trends of the year (including the cloud and virtualization) helped data centers use far less energy for servers and the infrastructure necessary to support them, but there remains plenty of room for growth.

“[The term ‘green IT’] is tossed around very casually these days, but for the movement to get real teeth, it needs to be better defined as to what it means,” Thibodeaux says. “The technology industry in general has a large role to play in sustainability and alternative energy development. Most of the initiatives and systems being contemplated will need an entirely new class of smart IT infrastructure to work. That’s especially true for the green building movement.”

Looking Ahead

PwC’s Garland says that many of the IT trends that shaped 2009 are multiyear in nature and in fact are just beginning to move up the “S-curve” of adoption, where they face a long run in front of them. And what else lies ahead? “Every year brings surprises that few would have predicted,” Garland says. “It’s the nature of technology and its increasing engagement with enterprises, consumers, and society. So we expect something will come out of the woodwork that nobody is talking about now.”

2009 IT Trends In A Nutshell

The year in IT was a compelling one for data centers seeking technology and strategies that could help them both survive and thrive in a rough economy. Philip Garland, leader of CIO advisory services at PricewaterhouseCoopers (www.pwc.com), identifies several 2009 trends that reflected this movement.

- SaaS experiences were a dry-run for full infrastructure “clouding,” with salesforce automation and social media helping to convince skeptics.
- Corporate strategy took social networking sites such as Facebook and LinkedIn and internal social tools such as Yammer beyond test-drive status.
- Mobile devices redefined the nature of application—disposable, cloud-resident, minimal-GUI, situational/location-driven.
- Customers looked to sweat their existing large, multiyear IT investments and see real, demonstrable value from them prior to considering new ways to automate.
- Just now, we’re seeing stirrings from company leadership of higher expectations from IT leaders that they create innovations and help drive revenue going forward.

COVER FOCUS

The Changing Role Of The IT Manager

One Of IT's Toughest Jobs Has Shifted Focus In 2009

by Sixto Ortiz Jr.

2009 WILL BE REMEMBERED as a harrowing year marked by a tremendous financial crisis that roiled markets and severely strained enterprises. In many ways, this year also signified a turning point of sorts over the role that IT managers play in modern enterprises. In short, IT managers assumed a larger, more strategic role in many enterprises as IT was increasingly recognized as a function vital to the strategic success of organizations.

Change Arrives

One factor widely recognized as a catalyst for change in the role of IT managers is the arrival of IT services, most notably the increasing use of cloud computing for delivery of business applications. Gary Mayer, an independent consultant with 40 years of experience in the computing industry, says adoption of the cloud computing strategy mitigates hardware management but poses additional challenges for IT managers.

Among these challenges are application selection, the integration of multiple cloud and in-house systems, security risks, and networking requirements. Also, he adds, the role of the IT manager has become less technical and more business-oriented as the use of services becomes the rule rather than the exception.

Matthew Busch, product marketing executive at UC4 (www.uc4.com), says with the arrival of new technologies such as SOA, cloud computing, and virtualization, IT is now poised to deliver quality IT services at reduced costs. So, Busch says, IT is now in a position to become the economic enabler of the competitive advantage many organizations are looking for.

Dave Sobel, CEO of Evolve Technologies (www.evolve-tech.com), adds that as more services are moved to the cloud, IT managers are less in charge of managing onsite systems and increasingly responsible for making sure services are delivered appropriately in terms of contracts or needs.

Compliance Requirements Get Tougher

As regulations proliferate and compliance pressures increase, the role of the IT manager is also evolving into that of an agent of regulatory compliance. Dr. Mickey S. Zandi, managing principal at Sungard Availability Services (www.availability.sungard.com), says data center managers are not shielded from business demands because they are responsible for running mission-critical applications that cannot suffer downtime. But, he adds, stricter regulations and compliance bring added pressures because downtime can not

in terms of privacy, regulations such as the new Massachusetts Data Privacy Regulations require that companies understand, at a very detailed level, where personally identifiable information is in their systems, says Cuff, who adds that controls need to be in place that really require companies to know exactly where their data is.

Also, he says, companies need to not only do the right thing but also ensure that record-keeping proves the right things are getting done. Finally, Cuff says creating strong partnerships with an organization's legal team is also a change that has been underway.

The importance of compliance tasks that are now on the plate of busy IT managers cannot be understated. According to Mike Logan, president of delivery and operations at Axis Technology (www.axis-technologyllc.com), IT departments are on the front lines of the battle to ensure compliance with new and potentially crippling data security laws, meaning IT managers are now participating in meetings with legal teams and CFOs. These new laws could easily bankrupt companies of all sizes in any industry, so CEOs are putting a lot of pressure on IT to ensure compliance and iron-clad security.

Partners With Business

As IT managers' roles evolve, they are becoming more strategically entrenched with their organizations and are now asked to help the business with a variety of tasks that are of key strategic importance.

For example, says Jonathan Gossels, president at SystemExperts (www.system-experts.com), IT and data center managers are now expected to be responsive in providing the business with reliable computing

infrastructure and providing the required support for new business initiatives. And, of course, all of these tasks must be delivered with minimal headcount and operating costs.

In fact, says Sungard Availability Services' Zandi, because critical applications are hosted in data centers, today's IT is not only a service provider, but a business enabler. Therefore, Zandi says data center managers are an integral part of making the vision of an organization a reality, and as always, they must consistently deliver more services with fewer funds.

Business and IT success go hand in hand with today's tough business environment. UC4's Busch says that business units in organizations are under pressure to do more with less, so they are turning to IT as an enabler of automation and process improvement. By leveraging new technologies, he says, IT can provide the agility, automation, and process improvements that will enable the business to succeed.

The Evolution Of The IT Manager

So how will the role of the IT or data center manager continue to evolve in future years? Here are some thoughts from industry experts:

Kevin Low, president and CEO of Secured Network Services (www.sns-usa.net), believes IT managers will become a member of the business inner circle. "A trusted and reliable IT manager with business smarts," says Low, "will be the CEO's new right-hand man."

Ahmar Abbas, senior vice president of global infrastructure management for CSS Corporation (www.csscorp.com), says that the IT manager, as the manager of a portfolio of services, will need to evolve into a product developer—one who can quickly create and deliver cost-effective IT services to the business.

Independent consultant Gary Mayer says business intelligence, social networking, and nonrelational databases will add additional challenges to the IT/data center manager's responsibilities. Management will increasingly use that data to answer questions, so as the volume of unstructured data increases geometrically, it will become necessary to make that data a part of the decision-making process.



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Product	Black Box ClimateCab NEMA 12 Cabinets	Black Box ClimateCab NEMA 12 Wallmount Cabinets	KwiKool Strategic Air Center 1411
			
Description	<p>Climate-controlled protection found in Black Box ClimateCab cabinets lets you install servers without the need for additional cooling or costly infrastructure. These enclosures are NEMA-12-rated, meaning they are ideal for use in indoor locations with falling dirt; circulating dust, lint, and debris; and dripping or splashing liquids.</p> <ul style="list-style-type: none">• Full-sized cabinet with 42U of rack space• Available with 12-24 or M6 rails• Choose from models with 6,000 or 8,500 BTU air-conditioning units• 40-inch depth accommodates most servers <p>Best For: Housing servers in remote locations without cooling infrastructure.</p> <p>Price: \$4,499.95 to \$5,499.95</p>	<p>Secure, wallmount ClimateCab cabinets provide a compact way to protect and cool sensitive components. Users can install the NEMA-12-rated wallmount cabinets in indoor environments where falling dirt; circulating dust, lint, and debris; and dripping or splashing liquids would otherwise cause problems for equipment.</p> <ul style="list-style-type: none">• Compact wallmount design saves space• Operates on a standard 115V power source• Single- or double-hinged• Choose from a cabinet with a fan or an 800 BTU air-conditioning unit <p>Best For: Equipment protection in hot, dirty environments such as factory floors.</p> <p>Price: \$999.95 to \$2,795.95</p>	<p>As one product in KwiKool's Strategic Air Center series of portable spot coolers, the SAC 1411 features micro-processor digital controls and an Easy-Touch control panel. The unit is an air-cooled, 1.15-ton portable spot cooler that operates on a 115V/15A circuit. The SAC 1411 also supports 460 CFM evaporator airflow and 1,200 CFM condenser airflow.</p> <ul style="list-style-type: none">• Provides 13,850 BTU/hr of cool air at 95 degrees Fahrenheit at 60% RH• Operates on a standard 115V power source• Operating range between 60 and 110 degrees F• Easy-access hinged panel with Kwikloks <p>Best For: Computer rooms, server closets, or warehouse use.</p> <p>Price: \$3,495</p>
Contact	(724) 746-5500 www.blackbox.com	(724) 746-5500 www.blackbox.com	(800) 972-6600 www.atlassales.com

Product	MaxPower CoolCube 10	Temp-Air Topaz TZ-18A
		
Description	<p>The CoolCube 10 is a unique modular air-conditioning system that users can install standalone or stacked in a 19-inch server rack, above a drop ceiling, or as a portable spot cooler. Features include a programmable control panel, electronic thermostat control, and a 2.5-gallon condensate collection tank.</p> <ul style="list-style-type: none">• Can be mounted in a rack or above a ceiling or used as a portable unit• Provides 10,000 BTU/hr of cool air at 95 degrees F at 60% RH• Stackable for redundancy or added capacity• Operates on a standard 115V power source <p>Best For: Computer rooms, server closets, and IT facilities with limited floor space.</p> <p>Price: \$2,600</p>	<p>The Temp-Air Topaz TZ-18A is a portable air conditioner that operates at decibel levels suitable for an office environment. Features include a backward-inclined plenum evaporator and condenser fans and a thermostatic expansion valve that automatically adjusts to the environment to accommodate extreme temperatures.</p> <ul style="list-style-type: none">• Provides 17,600 BTU/hr of cool air at 95 degrees F at 60% RH• Operates on a standard 115V power source• Programmable temperature controls• 1,000 CFM condenser• Runs at 63dB sound level <p>Best For: Office environments that require a quiet-running spot cooler.</p> <p>Price: \$3,672</p>
Contact	(800) 367-8675 www.spot-coolers.com	(800) 836-7432 gotopaz.com

PRODUCT SPOTLIGHT

PHYSICAL INFRASTRUCTURE

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

compiled by Andrew Leibman

MovinCool CM12



The MovinCool CM12 is a ceiling-mounted air conditioner that is just 15.5 inches tall, making it ideal for spot cooling space-limited installations and server rooms. The CM12 frees up valuable floor space and features built-in flanges and mounting brackets, letting users install it quickly and with minimal effort. The CM12 is a cost-effective spot-cooling alternative to central air conditioning.

- Provides 10,500 BTU/hr of cool air at 80 degrees F at 50% RH
- Provides 7,200 BTU/hr of cool air at 95 degrees F at 50% RH
- Operates on a standard 115V power source
- Fits into tight ceiling spaces, freeing up floor space

Best For: Space-limited equipment rooms and cramped server and telecom closets.

Price: \$2,895

(800) 264-9573
www.movincool.com/dealer.php

MovinCool CM25



The MovinCool CM25 is a ceiling-mounted air conditioner that is 20 inches tall and compact enough to fit above a drop ceiling to spot cool compact server rooms that need robust heat evacuation. The CM25 features a wall-mounted electronic controller that lets users monitor and troubleshoot problems. The unit also features built-in flanges and mounting brackets for easy installation.

- Provides 25,000 BTU/hr of cool air at 80 degrees F at 50% RH
- Provides 18,000 BTU/hr of cool air at 95 degrees F at 50% RH
- Operates on a 208/230V power source
- Wall-mounted controller with LCD

Best For: Server rooms and other spaces with high heat loads.

Price: \$6,995

(800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro 12



The MovinCool Office Pro 12 is a portable spot cooling air conditioner designed to lower operating temperatures of computers and networking, communications, and office equipment to maximize reliability and hardware life span. The Office Pro 12 is self-contained and features an electronic thermostat and a programmable control panel for cooling when and where you need it most.

- Provides 11,800 BTU/hr of cool air maximum spot cooling
- Programmable digital controller
- Operates on a standard 115V power source
- No costly installation necessary
- Maintains ideal operating temperature for heat-sensitive electronics, down to 65 degrees F

Best For: Offices filled with heat-generating electronics.

Price: \$3,655

(800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro 18



The MovinCool Office Pro 18 offers superior cooling capacity without requiring a nonstandard power source. This portable air conditioner protects sensitive data and electronics systems from loss and failure, acting as an insurance policy for your infrastructure. The Office Pro 18 features an intuitive control panel that lets users designate when the unit operates.

- Provides 16,800 BTU/hr of cool air maximum spot cooling
- Operates on a standard 115V power source
- Programmable controls enable weekend and after-hours cooling
- No costly installation necessary
- UL Listed for safe operation

Best For: Heat-sensitive office and data systems.

Price: \$4,065

(800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro 36



The MovinCool Office Pro 36 delivers 36,000 BTU/hr of spot cooling for sensitive equipment. The Office Pro 36 features an intuitive control panel that lets users program the unit to operate after hours or on the weekend. The portable self-contained air conditioner requires no costly installation.

- Provides 36,000 ETL-verified BTU/hr of cool air maximum spot cooling
- Operates on a 208/230V power source
- Features an AFCI plug for added safety against electrical arcing
- Supports a plug-and-play condensate pump
- Easy-to-use programmable controls
- Self-contained, portable, and easy to set up and operate

Best For: Servers, routers, telecommunications, and other heat-sensitive equipment.

Price: \$6,995

(800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro 60



The MovinCool Office Pro 60 delivers up to 60,000 BTU/hr of cooling capacity, making it twice as powerful as MovinCool's Office Pro 24. This portable air conditioner is designed to manage temperatures for computer networks, communications equipment, and office electronics. The self-contained Office Pro 60 is easy to install—just position the wheeled unit, plug it in, and turn it on.

- Programmable digital controller enables weekend and after-hours cooling
- Operates on a 220V power source
- Delivers 60,000 BTU/hr of cool air to the room that needs it most
- Maximizes the life span of heat-sensitive electronics by cooling environments to the low 60s F
- Condensation pump included for uninterrupted operation
- UL Listed for safe operation

Best For: Large office spaces and computer rooms filled with heat-sensitive electronics.

Price: \$11,145

(800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro 63



Like its sibling the Office Pro 60, the MovinCool Office Pro 63 delivers up to 60,000 BTU/hr of cooling capacity and is ideally suited for the demands of large office spaces and heat-sensitive electronics installations. This portable air conditioner is self-contained and operates on 460V power for as little as 15 cents per hour.

- Programmable digital controller enables weekend and after-hours cooling
- Operates on a 460V power source
- Provides 60,000 BTU/hr of cool air to the room that needs it most
- Maximizes the life span of heat-sensitive electronics by cooling environments to the low 60s F
- Condensation pump included for uninterrupted operation
- UL Listed for safe operation

Best For: Large office spaces and computer rooms filled with heat-sensitive electronics.

Price: \$12,495

(800) 264-9573
www.movincool.com/dealer.php

Midsized Companies At Increased Cyber Risk

“Threats up, budgets down. This is what we call the ‘security paradox.’” So says a recent report from McAfee.

“The Security Paradox: The First Global Study that Quantifies the Cost of Reactive Versus Proactive Security in a Midsize Organization,” says cyberattacks are on the rise. The news is of particular interest to medium-sized enterprises, McAfee says. The study, which was conducted by MSI International, surveyed businesses with 51 to 1,000 employees in Western nations, India, and China.

In the United States, the middle tier has had an average of 322% more hack attempts this year than in 2008. Worldwide, new malware discovered in the first half of this year—1.2 million unique samples—approached the entire previous year’s total of 1.5 million. About 19% of organizations lost revenue, an average of \$41,000, because of a security breach. More than a third (37%) of those affected spent three or more days doing



damage control after the attack. An overwhelming 78% express concern about being targeted by cybercriminals, and about 71% of enterprises believe that they could be wiped out by an effective hacking incident.

And yet there’s a paradox. Because of the worldwide economic climate, McAfee reports, organizations chilled spending on IT security as they scaled back overall expenditures. McAfee says that about 75% of companies either cut their security budgets or froze them. With most of the world facing leaner economic conditions, including hackers but also recently laid off or departed employees with inside knowledge of corporate systems, the cyberthreat level has risen considerably just as organizations have made themselves less able to counteract it.

Mistaken Impression

“According to the report, midsize companies are under the mistaken impression that hackers prefer to target larger companies,” says Darrell Rodenbaugh, senior vice president of the global midmarket segment for McAfee. “Almost half of midsize organizations surveyed think larger organizations with 501+ employees are most at risk for a security attack. However, organizations with fewer than 500 employees actually suffer from more attacks on average. The good news is that the research also shows that organizations that put more effort on preventing attacks can end up spending less than a third as much as those that allow themselves to be at risk.”

McAfee recommends a proactive approach when preparing for potential threats and planning for mitigation after the fact.

by Marty Sems

HOW TO

Label & Document Cables

Get Organized & Take Control

by Elizabeth Millard

PART OF RUNNING AN EFFICIENT DATA center is taking on larger technology issues, but just as much focus also needs to go into looking at the details. Taking control of the cables that flow from patch panels to equipment might seem like a minor consideration at times, but proper labeling and documentation can minimize disruptions and wasted time.

As a data center expands, cabling use tends to grow, as well, so having strong tactics for keeping cables organized along the way can be invaluable. Here are some suggestions from experts that will help you ensure you’re creating a robust strategy and staying on track with cable documentation.

Recognize The Need

Because of the numerous demands of a data center, cable organization and management often gets put off and ignored, notes Warehouse Cables’ Peter Hail (www.warehousecables.com).

“When planning and documenting the network, cable identification is often overlooked,” says Hail. “Yet cabling is part of the network hierarchy and should be documented as such.”

Proper cable management can be beneficial for efficiency and even for cooling. Having well-maintained patch panels and cable plants with a minimum number of cables means that a cooling system won’t have to chill extra cables. Having properly

Hail notes. These can be useful for uncrowded patch panels, but in areas that are thick with cabling, labels that are too large or hang too low can get tangled, so add that into the equation when thinking about labeling.

Some data centers rely on permanent marker, and if this has worked in the past, there’s nothing inherently wrong with continuing the practice. But the danger with this tactic is that one person’s handwriting might not be as clear as a printed label, or the marker could get smudged inadvertently. Also, be sure that each end of the cable is labeled.

Another consideration is what to include on the labels. Duncan Lee, CEO at PDU Cables (www.pducables.com), notes: “Label the cable with the power source that it is being fed from and the destination that it is feeding. Include the data center grid number, if available, for easier identification.” Other cable specifications that could be included are conduit color, device type, port number, device location, switch name, and cable length.

“Proper cable labeling ensures that cables are easily located and that the correct cable is selected,” says Lee. “This prevents incorrect cables from being disconnected. It also allows for contractors, who may not be familiar with the facility, to be able to perform work with little or no supervision.”

Periodically, an IT employee should do a visual inspection of all cables to make sure the labels are being maintained properly and

Proper cable management can be beneficial for efficiency and even for cooling.

configured cables also facilitates better airflow, another consideration when trying to keep cooling costs reasonable.

Also, such a system can give an accurate count of switch and storage ports available in the data center, which can be important when adding new equipment or trying to reconfigure for a strategy such as virtualization.

One of the pitfalls of an extensive cable labeling and documentation effort is that it all takes time and can be tedious. But compared to trying to navigate panels that look like spaghetti while doing troubleshooting, it’s worth the time and energy.

Labeling Practices

Cable identification begins with a general visual reference in terms of physical routing, color coding, and associated hardware, Hail states.

Once a cable can be traced from a patch panel to its relevant piece of equipment, labeling can be done, and this might come in a variety of methods. There are user-printable wrap labels that have a heat-shrink capability, reducing the chances that the labels might rip or fall off.

Other options are nylon ties with flag labels and dog-tag style hanging labels,

aren’t fading or peeling. Some data center managers take advantage of planned data center outages to do cable labeling work to minimize service interruptions. This can be especially helpful if a cable situation requires some rip-and-replace tactics.

Going For Documentation

Once cables are physically labeled, they can be documented using tools such as cable management software and cable configuration tools.

Hail notes that small to midsized enterprises may want to employ visual software tools that can be utilized as determined by the network’s complexity. These tools might be in the form of freehand software, he notes, or even shareware.

He adds that if a data center is larger or has a more complex setup, it might be preferable to opt for management software that complies with industry standards such as ANSI/TIA/EIA 606A for horizontal and backbone cables, hardware, assets, pathways, locations, and users.

Applications that can track the physical layer are able to assess the impact of changes to infrastructure, which can lower operation costs, improve the availability of assets, and even meet regulatory

Key Points

- Recognize the need for a cable labeling and documentation strategy, which should be scalable to grow as a data center expands.
- When choosing a label option, think about what would be best across the data center and would cause the least confusion.
- Consider employing cable management software, either as a simple shareware application for simple tracking or more extensive applications that comply with industry standards.

compliance requirements. Particularly valuable are software tools that can communicate labeling and documentation in a visual format for especially complex cable arrangements, but for smaller centers, a cable configuration tool might take the form of a spreadsheet, with drop-down menus for options for conduit color, breaker type, cable length, and other information.

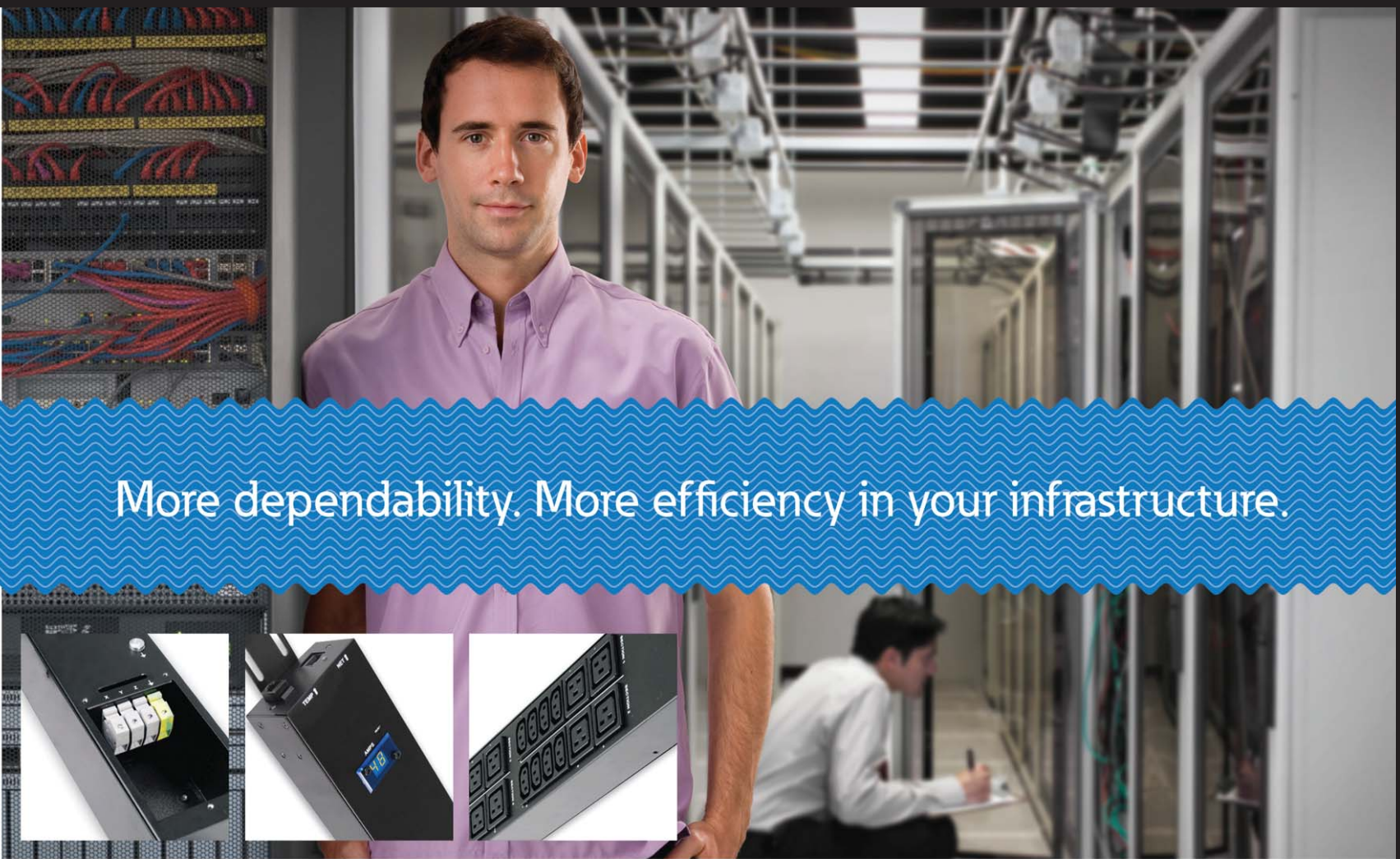
When using software, it’s important to make sure that the information is updated as needed. Although that might sound like common sense, it’s sometimes the case that an IT employee moves a cable or swaps one out for a longer cable and forgets to label the new cable and record the switch into the application.

Also important is to have a repeatable process with plenty of standardization. A simple process that is understood by all IT employees can allow cables to be located easily and also reduces the amount of time spent on cabling when new connections and equipment are added.

Documenting and labeling isn’t exactly the most thrilling job for IT, and many data center managers might prefer a lengthy dentist appointment over tackling cable management. But staying organized and keeping patch panels neat does have its benefits, including reduction of time spent tracing cables from one connection to another. **P**

TOP TIPS

- Stick to one type of identification method; for example, don’t mix markers, tags, and heat-shrink labels. One of the keys to staying organized is standardization.
- When making labels, be sure to include the power source a cable is being fed from and also the destination it is feeding. You should also record the data center grid number, device type, port number, device location, or other relevant specs that will help keep your SME organized.
- Think about getting tidier with physical organization tools, such as trays and underfloor channels.
- When getting rid of equipment, be sure to also unplug the relevant cables and take them out of any cable management applications. If a data center manager discards or stores the cables but forgets to make the change in management software, it could lead to confusion later.
- Make sure yours isn’t a wasted effort by periodically checking the labels to make sure they are still relevant and still intact.



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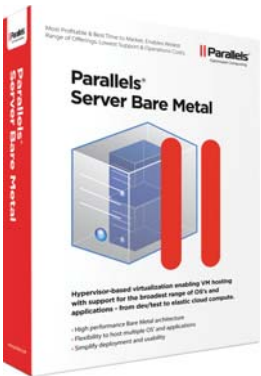

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Server Virtualization Tools

Product	Citrix Essentials For Hyper-V	Citrix Essentials For XenServer	Citrix XenServer
Description	<div><p><small>*High availability only offered with Citrix XenServer</small></p></div> <p>Citrix Essentials For Hyper-V extends the enterprise management capabilities of Windows Server 2008 Hyper-V and System Center Virtual Machine Manager in the areas of storage management, provisioning services, and lab automation to maximize the benefits of deploying Hyper-V virtual infrastructure.</p> <ul style="list-style-type: none">Enables customized automation of the key management processes for the Hyper-V virtual infrastructureStorage integration via Citrix StorageLink technologyA single image for simple deployment of workloads to any combination of Hyper-V machinesStage management that lets you create customizable workflows and define multimachine configurations <p>Best For: Advanced server virtualization management capabilities for Hyper-V to help Windows Server 2008 customers create environments for Hyper-V virtual machines.</p> <p>Price: \$1,650 for Enterprise Edition; \$3,300 for Platinum Edition</p>	<div></div> <p>Essentials for XenServer provides advanced server virtualization management capabilities, including application delivery, optimization of computing resources, and rapid provisioning of new resources on demand.</p> <ul style="list-style-type: none">Citrix StorageLink provides storage management directly to the server virtualization environmentGranular visibility into real-time system performanceStreamlines the process of building, testing, sharing, and delivering applications on demandSelf-service setup and tear-down for nonproduction environments typically used in deployment <p>Best For: IT administrators who must manage virtual environments that need the ability to create highly scalable and responsive virtual infrastructures.</p> <p>Price: \$2,750 for Enterprise Edition; \$5,500 for Platinum Edition</p>	<div></div> <p>Citrix XenServer is an enterprise-class, cloud-proven server virtualization platform that provides live migration and centralized multiserver management. Version 5.5 also offers shared storage support and P2V (physical-to-virtual) and V2V (virtual-to-virtual) conversion tools.</p> <ul style="list-style-type: none">XenMotion lets users manage the virtualized environment while optimizing resources with zero downtime to usersShared VM template libraryVirtual infrastructure patch managementHot-swappable disks and NICs <p>Best For: Admins looking to reduce data center costs by transitioning to a dynamic, easy-to-manage IT service delivery center.</p> <p>Price: Free</p>
Contact	(800) 424-8749 www.citrix.com	(800) 424-8749 www.citrix.com	(800) 424-8749 www.citrix.com

Product	Microsoft System Center Server Virtual Machine Manager R2	Parallels Server	Parallels Virtuozzo Containers
Description	<div></div> <p>A multivendor management tool that helps centralize administration of physical and virtual assets, increase the utilization of servers, and optimize the virtual IT infrastructure. Management is performed through a single console.</p> <ul style="list-style-type: none">Functionality to migrate storage for running VMsiSCSI target and SAN-based migration across clustersTemplate-based rapid provisioningAutomates the evacuation of VMs off host machines <p>Best For: IT staff who want to consolidate physical servers and quickly provision new virtual machines and physical servers.</p> <p>Price: \$869 for Enterprise License; \$40 per license per operating system environment or per user with Client License</p>	<div></div> <p>Parallels Server is a blended solution enabling deployment of both hypervisors and containers on a single physical computer.</p> <ul style="list-style-type: none">Bare-metal installation requires no primary operating systemFlexible deployment options of virtual machines or OS containersFull and incremental virtual machine and container backupsIntegrated usability tools enable an efficient user experience <p>Best For: Consolidation projects in the data center, because it provides the flexibility to tailor implementations to end-user or application demands.</p>	<div></div> <p>Parallels Virtuozzo Containers is an OS virtualization solution for Windows and Linux. Parallels Virtuozzo Containers creates isolated containers on a single physical server and OS instance, offering the highest levels of density, performance, and manageability.</p> <ul style="list-style-type: none">Run the most virtual environments per physical serverDecrease OS sprawl while increasing the ability to easily manage virtual serversConsolidate performance-sensitive workloads without experiencing issues with native performance <p>Best For: Organizations seeking to deploy virtual desktop infrastructures or large numbers of on-demand virtual private servers from the least number of physical computers.</p>
Contact	(800) 642-7676 www.microsoft.com	(425) 282-6400 www.parallels.com	(425) 282-6400 www.parallels.com

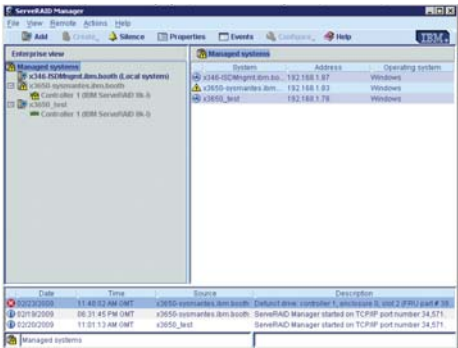
PRODUCT SPOTLIGHT

NETWORKING & VPN

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Compiled by Nathan Lake

IBM Systems Director 6.1



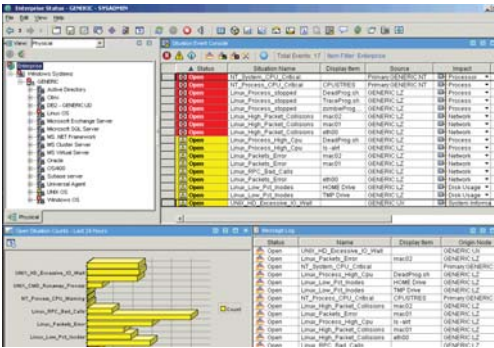
IBM Systems Director 6.1 streamlines the way physical and virtual systems are managed across a multisystem environment. IBM Systems Director provides a single user interface that delivers consistent views for visualizing managed systems, determining how the systems relate to one another, and helping correlate technical resources.

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Best For: IT administrators who need a platform for managing their virtual servers.

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IBM Tivoli Monitoring



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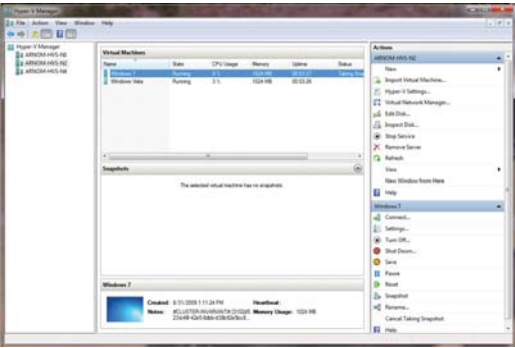
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Best For: Workers who must remotely manage operating systems, databases, and servers in distributed and host environments.

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Microsoft Hyper-V Server 2008 R2



Windows Hyper-V Server 2008 R2 makes it easier for you to utilize virtualization to increase availability for virtualized data centers, improve management, and increase performance for both Hyper-V Virtual Machines and Virtual Networking Performance. Hyper-V lets you consolidate multiple server roles as separate virtual machines running on a single physical machine.

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Best For: People with Windows Server 2008 R2 who want to add the ability to implement server virtualization with ease.

Price: Free

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Sun Microsystems Solaris Containers



As an integral part of the Solaris 10 Operating System, Solaris Containers provide server virtualization with low overhead at no cost.

- Provides lightweight, agile, software-defined boundaries to create virtual servers
- Consolidates hundreds of existing enterprise-class workloads onto a single system
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Price: Free with Solaris 10 OS

(888) 516-9362
www.sun.com

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FEATURED PRODUCT

Eye On The Network

Napatech's Adapter Technology Could Help Spawn A Universal Approach To Network Appliances

by Christian Perry

• • •

IN THE AVERAGE data center, a network adapter is by no means a sexy device. After all, it doesn't virtualize servers or store data on fancy flash memory, but instead it merely facilitates the flow of data between computers. However, with the network



becoming an increasingly critical component of modern data centers, network adapter vendors have an opportunity to shine with unique approaches that can help organizations better utilize their big network pipes. Napatech is doing just that with a product that could give data centers a new perspective on network appliances.

"In general, the use of dedicated network appliances is becoming more prevalent as we move to higher and higher speeds—and as we need to monitor not just some of the traffic, but all of the traffic," says Dan Joe Barry, vice president of marketing for Napatech (www.napatech.com). "Building more intelligence into routers is an option that has been chosen in the past, but at high speed, real-time network monitoring and security are both compute- and data-intensive, justifying dedicated solutions."

While there are indeed proprietary appliances that can deliver network analysis, forensics, security, and other tasks, it's now possible to use less-expensive standard servers instead. This is because multicore CPU architectures grace many of today's boxes, and also because specialized network adapters can handle the capacity and efficiency required for high-speed network monitoring.

Built For Speed

Napatech's NT20E is a 2 x 10Gbps PCI-E adapter that offers data capture, processing, and delivery of network data traffic with almost no CPU load. The card's capture function runs at full gigabit line rate at all frame sizes to eliminate packet loss. In addition, HW (hardware) time-stamping; data merging, filtering, and tagging; and dynamic slicing help to deliver significant frame processing offload for host systems. Placed in a standard server, this device can help transform the box into a universal appliance that can provide dedicated network functions.

"Customers have been aware for some time that using standard servers as an appliance platform is a viable option. With the universal appliance concept, two key issues have been addressed: server computing architecture and full throughput," Barry says. "With the latest CPU and memory architectures, the raw computing power is available for even the most demanding tasks, while specially designed network adapters from companies like Napatech are addressing the full throughput issue."

Standard NICs that typically appear in standard servers might do an adequate job of handling the input/output of data packets to and from a specific MAC/IP address, but that same performance isn't evident when standard NICs are used to handle all traffic for all MAC/IP addresses on a network. The NT20E and other Napatech adapters can handle that task, but not at the expense of building or buying costly systems. Because Napatech's adapters conform to PCI standards, they can easily replace standard NICs.

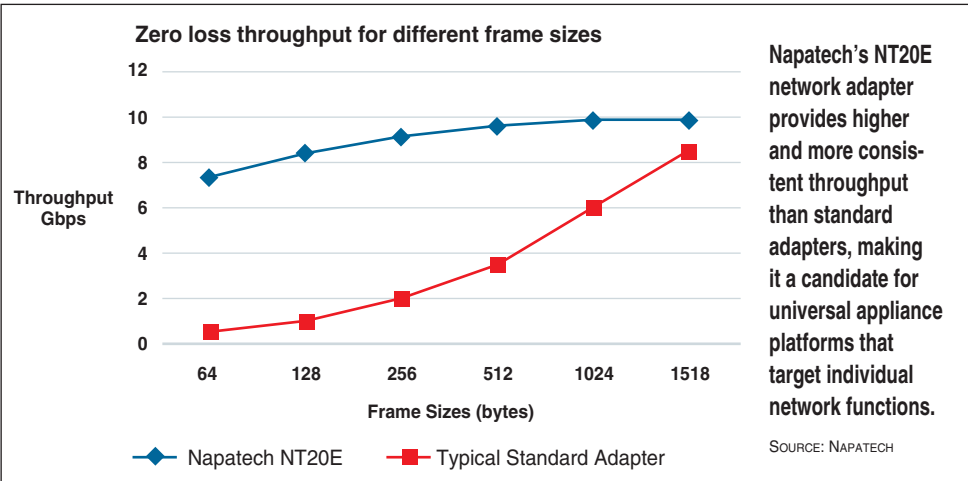
Fit For Flexibility

With a specialized network adapter such as the NT20E serving as the centerpiece of a universal appliance, a data center can choose to change the appliance to fit the purpose or application at any time because the other parts in the server are standard. For example, Barry says, the same platform can run a different application, or even multiple applications, whether it's performance monitoring, network security, or even a test and measurement application.

the servers and associated network adapters are available, and they can be quickly installed to provide the platform for the intended network appliance. End users, for their part, could have access to affordable network appliances that can capture, analyze, and potentially transmit all data received in real time, without experiencing any packet loss.

"Universal appliances are not a panacea—they won't make the application software better, but the likelihood is that, compared to using standard network interface cards, the Napatech network adapters will increase the overall throughput significantly. The system is accelerated through intelligent handling of data and the possibility of intelligently distributing data to multiple CPU cores, allowing parallel processing," Barry says.

In this type of configuration, customers can run multiple instances of the same application or even several different applications at the same time. The NT20E and other Napatech adapters can feed captured frames to up to 32 CPU cores, helping to truly balance loads and take advantage of



"Standard servers, which are the basis for universal appliances, form the backbone of data centers today. They are completely compatible, and this is what makes them so appealing. The methods for gaining access to links to be monitored and secured are also

spare horsepower. In fact, depending on the adapter, customers can get precisely the distribution scheme they desire.

For example, with distribution per port, all frames captured on a physical port are fed to the server buffer, whereas distribution per traffic type shuffles different traffic types to different server buffers. The latter instance, for instance, can accommodate protocols recognized by the frame decoder or specified by bit patterns. Another scheme, distribution by flows, is based on hash keys to ensure that the frame from the same traffic flow always goes to the same CPU cores. ■



well-established, as well as the integration of the application software into the overall management system. In many respects, the universal appliance concept addresses many of the issues involved in deploying proprietary hardware with respect to compatibility, power usage, fit, etc.," Barry explains.

Napatech's adapters take that high-flexibility philosophy to heart with a choice of application interfaces that eases integration with customer application software. These include the NTCI (Napatech Common Interface) API, which provides access to all Napatech adapter features via Napatech drivers, and a PCAP (packet capture) API, which the company supports via its advanced LibPCAP library.

Improving The Network

According to Barry, the universal appliance concept is one that's within reach of any system vendor, as it's not complicated;

Gartner Buys AMR Research

Gartner has acquired AMR Research for \$64 million in a deal that is expected to be completed this month. AMR Research focuses primarily on supply chain management and has about 85 employees. Both companies are expected to see benefits from the acquisition: AMR Research will be able to address a larger audience and expand the number of verticals it covers, according to AMR Chief Research Officer Bruce Richardson. It will also give its clients global support with Gartner's worldwide reach. Gartner will see expanded research offerings.



Apple, Psystar Make Deal

Apple and Psystar have agreed to settle their 17-month legal dispute, which will stop Psystar from preinstalling Apple's operating system on the Intel-based computers it sells. The Mac clone maker will also pay Apple \$2.76 million for breach of copyright. The settlement comes after Apple's request for a permanent injunction that would shut down Psystar's Mac clone business and require Psystar to pay \$2.1 million in damages. The injunction was prompted by a ruling by U.S. District Judge William Alsup that found that Psystar violated both Apple's copyright and the Digital Millennium Copyright Act.

Windows 7 Shows Gain In Shares

The November operating system market share numbers from industry analyst firm Net Applications show that although Windows 7 had significant gains, those gains were largely offset by losses for Windows XP, and to a lesser extent, Vista. Between October and November, market share remained static at 92.52% for all Windows OSes. Mac market share declined from 5.27% in October to 5.12% in November. Linux did a little better, climbing from 0.96% to 1% between October and November. According to the report, WinXP's share declined 1.45% to 69% of the total market. Vista's share dropped 0.2% to 18.6%. Win7's share in its first full month of availability jumped by 1.8% to a total 4% market share.

Report: Mobile Devices To Be Sold Mostly By Carriers

In-Stat forecasts that by 2013, more than 60% of all mobile devices, including netbooks and notebooks, will be sold by wireless carriers. Carriers can lower the cost of a netbook or notebook because the wireless carrier can lock customers into a monthly data plan that will generate greater service fees over the life of the contract. In-Stat expects that the total market for Internet-connected devices will have a 22.3% compound annual growth rate through 2013. In-Stat expects 31% of notebooks will be sold through carriers in 2013 and adds that 78% of Internet-connected devices will use processors with integrated multimedia acceleration. For more on this, see page 23.



NAPATECH NT20E CAPTURE

(888) 318-8288
www.napatech.com

Description: The NT20E is a high-performance, 2 x 10Gbps PCI-E network adapter for advanced data capture, processing, and delivery of network data traffic to a host system with virtually no CPU load.

Interesting Fact: The NT20E provides support for up to 32 CPU cores, allowing specialized applications for handling only one type of frame (such as mail, HTTP, or VoIP) to be placed on each CPU.

NETWORKING & VPN

THREE QUESTIONS

Take The Hassle Out Of Repetitive Tasks

ScriptLogic Helps SMEs Simplify, Speed Up & Improve Windows Management Processes

by Daniel P. Dern

• • •

AS ANYONE WHO OWNS or uses a computer knows, computers need ongoing management—much of which consists of performing the same task on a regular basis.

One vendor helping companies with Windows machines simplify this management is ScriptLogic (www.scriptlogic.com), a subsidiary of Quest Software. The company’s more than 27,000 customers include companies with 10-seat networks up through 100,000 machines.

Nick Cavalancia, vice president of Windows management at ScriptLogic, has been with the company for five years; before that, he says, “I was a VAR for them. I knew the founder and did some unofficial R&D along with sales, so I’ve been involved with the company since the first release of the first product.” Cavalancia has also been an IT administrator, IT manager, and IT consultant; he’s also written IT books on topics such as

Exchange 2007 and has done related speaking and training. “I’ve been in IT doing the work, helping consult and support it, and joined with a company making stuff I really liked,” he says.

■ **What are the biggest IT-related issues facing today’s small to midsized enterprise?**

“We’re seeing the tail end of the recession in IT, where budgets are opening up,” Cavalancia says. “There’s purchasing power for solutions and to advance IT as a whole, [such as by deploying] Windows 7, but we’re still not seeing a change in headcount. Or the IT staff may have gone from five to two, but the workload didn’t shrink.”

So it’s no surprise that “IT always wants to automate things that need to be done repeatedly [and] make them happen automatically,” Cavalancia points out. “IT needs to be freed up to deal with new gear,

with strategic planning [for] the important tasks that can’t be automated.”

■ **What should Processor readers know about your company’s products?**

“We don’t focus on any particular vertical [market],” Cavalancia says. “We focus on the pain in half a dozen key Windows management areas: desktops, servers, Exchange, Active Directory,

them easier to accomplish [and to] help the needs of any admin that is managing a Windows network.”

Cavalancia continues, “We work with Windows machines with, at minimum, Active Directory—i.e., machines with Windows 2000 and forward.”

■ **What makes your company unique?**

“We create software and security management solutions for Windows networks. Our goal is to centralize, automate, and simplify what admins do on a daily basis,” Cavalancia says.

“Our marketing slogan is ‘Point, Click, Done,’ meaning it should be simple and easy,” he says. “We take that internally as a business model on how to make everything. Our products should be easy to download, easy and fast to install, and should be immediately usable. For example, in my VAR days, I took ScriptLogic’s Active Administrator product to a hospital and had it up and running in 10 minutes and was trying to demonstrate the auditing function.”

Additionally, Cavalancia notes, “We have literally one degree of separation from our customers. Our developers are in the next room over from tech support, [so] tech support can walk over to development with a question.”

Plus, Cavalancia points out, “Because we’re part of the Quest family, our sales team can also offer other Quest products. We focus on the SMB, [and Quest focuses on the] enterprise. So we have two different products to sell to better meet a customer’s needs.”



SQL, and SharePoint. It’s the inherent challenges and issues of working with a Microsoft network. We have management products to take IT tasks and make

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ICANN: Don't Redirect Misspelled URLs

ICANN, or the Internet Corporation for Assigned Names and Numbers, wants to ban the practice of NXDOMAIN Substitution. That's the formal name for what happens when you make a mistake when you're entering a Web address, and you type in a domain that doesn't exist and are redirected to another site. Technically, you're supposed to get an error message so you're immediately aware of the problem. However, too often, according to a recent memo from ICANN, a misspelled domain results in a redirect to another site through various practices covered under the umbrella term NXDOMAIN Substitution. ICANN wants to ban the practice—except in cases demonstrated to be harmless—because NXDOMAIN Substitution results in delayed email bounce messages as well as risks to security, privacy, and the resilience of the Internet as a whole.



NIST Releases New Security Recommendations

Federal agencies need to work more toward continuous cybersecurity practices and to focus less on meeting the compliance requirements of periodic audits, according to the National Institute of Standards and Technology. The organization's draft of Revision 1 to its Special Publication 800-37, "Guide for Applying the Risk Management Framework to Federal Information Systems - A Security Life Cycle Approach," marks a shift from the current Certification and Accreditation process to a new Risk Management Framework. In addition to risk management, the revised process encourages better monitoring capabilities and incorporation of new security technologies as they arise.

Rise In Cyberattacks On U.S. Military

The U.S.-China Economic and Security Review Commission says that there were 43,785 malicious cyber incidents in the first half of this year targeting U.S. Department of Defense systems. In a recent report, the commission says much of the activity appears to originate in China. In all of 2008, there were only 54,640 computer attacks, and if the attacks continue at this pace, the 2009 rate will have increased 60% over 2008. The report indicates that the U.S. military has spent more than \$100 million in the past six months to remediate attacks on its networks.

Broadcom To Acquire Dune Networks

Broadcom announced it will acquire Sunnyvale, Calif.,-based Dune Networks. The acquisition would bring Dune's switch fabric products under Broadcom's umbrella and enable the company to enlarge its cloud and networking portfolio. One of Dune's products is a chipset that can support 100Gbps bandwidth speeds and more than 10,000 connected devices. Broadcom plans to pay about \$178 million for Dune, its outstanding assets, and its shares. The deal should close by the end of March.

When Today's 'Net Dies

Internet Protocol Version 4 Starts Its Long, Slow Slide To Oblivion

by Bridget Mintz Testa

. . .

THE AMERICAN REGISTRY for Internet Numbers says that IPv4 (Internet Protocol version 4) addresses—all 4,294,967,296 of them—will run out sometime in 2012. Will that mark the end of the Internet as we know it? Hardly.

Organizations are already in the process of getting ready to roll over to a new addressing scheme, Internet Protocol version 6. Is your enterprise prepared?

Many Addresses

Cries about the imminent end of IPv4 have been heard since at least the mid-1990s, so you might wonder if you really need to pay attention this time.

"The last two years is the first time you've heard from the regional Internet registries that the resource is running out," says Richard Jimmerson, ARIN's CIO. "Even in the 1990s, the problem was real because the addressing system was inefficient."

What saved us then, according to Jimmerson, was a new way of assigning addresses called CIDR (classless inter-domain routing). Before that, addresses had been assigned in blocks, and the smallest block—C class—contained 256 addresses.

The new CIDR scheme lets class size vary down to just one address. "CIDR and network address translation extended the lifetime of the resource," Jimmerson says. Today, the Internet Assigned Numbers Authority, which controls numbers for protocols, country code top-level domains, and IP address allotments, has about 26 blocks of the old Class A addresses left. Each Class A block contains 224, or about 16.7 million, addresses. Even though that sounds like a lot of addresses, at the rate devices are connecting to the Internet, that's about three years' worth. After that, new devices must get an IPv6 address.

Addresses Not Compatible

Getting IPv6 addresses wouldn't be a problem if IPv4 and IPv6 addresses were compatible. Unfortunately, they aren't. They won't even run on the same Internet—they'll run on two parallel Internets that never connect to each other.

Enterprises that use IPv4 today will have to address that incompatibility. If

they don't, they'll find increasing numbers of customers, suppliers, and partners who live on the IPv6 Internet won't be able to reach them. Nor will an IPv6 business be able to reach any of those IPv6 sources.

"When people are making the version 6 switch, they focus on the desktop and the server, but they forget everything that's network-enabled," says Dan Golding, vice president of Tier 1 Research. "They should audit every piece of equipment they've got, make sure they have the right software, get IPv6 addresses for everything, and start budgeting to replace equipment that can't be upgraded. Some applications must be rewritten, altered, or patched. Custom apps must be tested."

Once you do the equipment and software audits Golding recommends, you

Getting IPv6 addresses wouldn't be a problem if IPv4 and IPv6 addresses were compatible.

have three options for switchover to IPv6. One is network address translation, or NAT, which literally converts one IP address version to the other.

Option two is tunneling, which encapsulates packets of one protocol into packets of the other, usually IPv6 into IPv4. That way, the v6 packets can run over the v4 Internet. It can go the other way, too, but the v4 Internet is so much larger than the v6 Internet that most encapsulated packets will probably be v6 for a long time.

Option three is the dual stack. This means that all equipment connected to the Internet in your enterprise can run both IPv4 and IPv6 simultaneously and independently. You can also run IPv6 natively and exclusively, but it's unlikely that enterprises will just cut themselves off from the vast IPv4 universe.

IPv4 vs. IPv6 Addresses

IPv4 addresses are formatted in the familiar "dotted decimal" notation. IPv6 addresses use hexadecimal notation, so they include numbers and characters such as 0-9 and A-F.

An American Registry for Internet Numbers example looks like this: 3FFE:F200:0234:AB00:0123:4567:8901:ABCD. IPv6 addresses aren't backward-compatible with IPv4. Fortunately, users won't be subjected to the hexadecimal number system. They'll continue to see the human-friendly domain name/URL such as www.processor.com.

When will IPv6 run out? Not anytime soon. IPv6 has 2128 addresses instead of the 232 addresses of IPv4, equating to 340,282,366,920,938,463,463,374,607,431,768,211,456 addresses.

Key Points

- Internet Protocol version 4 addresses will run out sometime in 2012.
- There are three ways to deal with the incompatibility between IPv4 and IPv6 addresses: network address translation, tunneling, or equipping all your network-connected hardware and software with dual stacks so they can run either protocol.
- Enterprises should consider making necessary upgrades and updates now.

Methods In Use

All three of these switchover methods came into use at Bangor-headquartered Mid-Maine Communications and Pine Tree Networks. The company, recently acquired by Otelco Communications, is a facilities-based business and residential Internet service provider in the Pine Tree State.

"We had already started a project to implement IPv6 on our network," says Otelco Communications IT System Manager Daniel Modrusan. "We hadn't fast-tracked it because there was no demand, and then a customer came to us and asked for IPv6 connectivity."

Otelco Communications offered the customer native IPv6 connectivity with tunneling or NAT. "The customer encountered equipment problems so that, without a major overhaul, they couldn't do native IPv6," Modrusan says. "We had to implement an IPv4 NAT to IPv6."

The customer also wanted to change over part of its network to IPv6 but maintain IPv4 "islands." Those islands involved other major equipment upgrades for the customer, so instead, "we created tunnels so they didn't have to do more NAT there," Modrusan says. "We create an IPv4 tunnel and run IPv6 packets through it."

Otelco Communications created dual stacks on its own network. "To do v4-to-v6 or vice versa, we have to set up the NAT," Modrusan says. "Translation can be done at our gateway. Most [IT departments or data centers] are probably doing NAT from their internal network to their public IP address. Now they need to update all their translation to IPv6 on the firewall, router, etc."

From Golding's point of view, Otelco Communications was right to make all those upgrades and updates now. "We're far enough away to make replacements and changes in the normal IT budget cycle," he says. "This is the real reason to start now."

The IPv4 Internet isn't going away, of course. "It will take tens of years for IPv4 to fade away," Jimmerson says. Nevertheless, if you want to stay in touch with IPv6 users as their numbers grow, follow Golding's advice and start now.

FEATURED PRODUCT

Keep Remote Users Connected

Multi-Tech Systems' MultiModem rCell Provides Wi-Fi Access Via Cellular Services

by Joseph Pasquini

QUICKLY ESTABLISHING RELIABLE high-speed network access to remote field locations, ranging from busy construction sites to isolated monitoring stations, is always a daunting task for network administrators. Connectivity solutions have traditionally focused on leveraging commercial telecom providers to bring in the outside lines necessary for building out a conventional network infrastructure. This approach consumes both precious time and resources. The conventional alternative has been to provide cellular access to all employees on an individual basis at the site. Although this approach is better equipped to handle ad-hoc and machine-specific situations, it does not provide centralized, high-speed access to corporate network resources for multiple users. The unfortunate reality of both types of scenarios is that such deployments are often somewhat disjointed and are always costly in terms of budget and resources.

Cellular Routing

What network administrators needed was a way to rapidly, easily, and efficiently deploy WAN access utilizing cellular services. Enter the realm of the cellular router. Suitable for SOHO and commercial applications alike, cellular routers are network devices that integrate a cellular data modem in order to provide shared high-speed Internet access via Ethernet and Wi-Fi connections. The MultiModem rCell, manufactured by Minnesota-based Multi-Tech Systems (www.multitech.com), is an intelligent, ready-to-deploy cellular router designed for commercial applications. According to Jen Meyer, Multi-Tech's vice president of product management, the rCell router is perfect for mission-critical and data-intensive applications, such as downloading large files, sharing Internet access over high-speed wireless connections, or capturing real-time remote video surveillance. "We designed the MultiModem rCell intelligent wireless router specifically for customers needing cellular connectivity for data communication but who are worried about security," Meyer says. "With its Stateful Packet Inspection firewall and IPsec VPN, the rCell provides secure access to remote devices, making it perfect for ATM and point-of-sale applications, as well." Weighing in at just less than 12 ounces and measuring only 1.2 x 7 x 2.8 inches (HxWxD), the hearty rCell is designed to operate in harsh working conditions ranging in temperature from -30 to 60 degrees Celsius. Power requirements for the rCell range from 9 to 32VDC. "The rCell's small form factor and ruggedized aluminum

chassis support industrial temperature ranges and allow it to handle some of the most demanding environments," adds Meyer. Sporting both an RJ-45 10/100BaseT Ethernet port for LAN connectivity and an RS-232 DB-9 female serial port for direct equipment connections, the MultiModem rCell lets administrators leverage the appropriate interface option for tasks such as providing Internet access to a group of workstations or providing remote monitoring of a worksite's power generator. Dependent upon the connectivity needs associated with a given application, each

interface option offers distinctive features and benefits related to the technology it respectively supports.

High-Speed Protocols

Central to the rCell's high-speed communications capabilities is its support of both HSDPA (High-Speed Downlink Packet Access) and UMTS (Universal Mobile Telecommunications System) protocols. Both HSDPA and UMTS are specified by the 3GPP (3rd Generation Partnership Project) as part of the organization's global initiative to standardize mobile communication technologies. HSDPA, which is an enhanced 3G packet-driven telephony communications protocol for mobile telephone data transmissions, is also referred to in industry vernacular as 3.5G. Designed for applications with high data demands such as video and Web conferencing, the rCell's HSDPA Release 5 implementation supports a maximum download speed of up to 3.6Mbps and a maximum upload speed of up to 384Kbps. UMTS, another one in a series of 3G mobile telecommunications technologies, is also referred to as 3GSM in some circles as a result of the protocol's resemblance to the ubiquitous GSM (Global System for Mobile) standard. Similar in fashion to HSPDA, UMTS supports traffic-heavy applications including multimedia, video streaming, and database access. A maximum download/upload speed of up to 384Kbps is supported on the rCell router. Other traditional cellular protocols supported by the rCell include quad-band GSM, GPRS, and EDGE. SMS features such as texting, point-to-point, and broadcasting are also supported.

Commitment To M2M Communications

Meyer contends that the rCell router differentiates itself from the rest of the pack thanks to the company's support of

enhanced M2M (machine-to-machine) communications functionality. "There are very few applications we haven't seen in our 40 years in the M2M scene," explains Meyer, who adds that this experience in the M2M arena translates into realized cost savings for Multi-Tech's customer base. "In a machine-to-machine environment, there is usually a need to connect to only one application," says Meyer. "Yet most routers have multiple ports, which go unused. By including only the required connections, we can keep the size of the router small and the price of the device low." According to Meyer, the rCell also differs from similar devices in its class thanks to the inclusion of a straightforward Web-based administrative interface intended for both local and remote configuration and management. As a result, the Multi-Tech device is able to provide easy access to much of the router's advanced feature set. "This and its wizard setup feature greatly reduce the time it takes to deploy a solution," says Meyer. Three different connectivity modes are available: always on, wake up on ring, and dial on demand. The always-on network connection automatically establishes a wireless data connection and allows for around-the-clock surveillance, monitoring, or real-time data acquisition of any remote Ethernet device, such as a Web camera. If the data link is dropped in the event of poor reception or a complete loss of service, the rCell will automatically re-establish the data link. The wake up on ring configuration allows the rCell to awaken and initiate a connection when the router detects an incoming ring. For security reasons, administrators can configure the router to wake up based on a specific caller ID number. This configuration is ideal for mitigating the costs associated with keeping a modem operational on a 24/7 basis. When configured for dial on demand, the router only accesses the Internet when data is present. This setup is ideal for sharing Internet access among multiple networked workstations. ■

MULTI-TECH SYSTEMS MULTIMODEM rCELL

(800) 328-9717
www.multitech.com

- **Description:** Ready-to-deploy intelligent cellular router provides shared wireless Internet access to remote locations.
- **Interesting Fact:** The rCell supports both tri-band UMTS/HSDPA 3.6 and quad-band GSM/GPRS/EDGE.



Study: Wireless Carriers To Sell Mobile Devices

A recent study from market research firm In-Stat said that by 2013, more than 60% of all mobile devices, such as netbooks and notebooks, could be sold by wireless carriers. In-Stat predicts that 23% of those devices will be notebooks and that the total available market for Internet-connected devices will grow at a 22.3% compound annual growth rate. According to Jim McGregor, chief technology strategist at In-Stat, wireless carriers have been slow to adopt the idea of becoming device vendors due to the amount of difficulty it can pose. "[Carriers] have to worry about what devices they carry, if they're competitive; they have to preorder them, they have to sign up for certain agreements to get certain prices, and they have to subsidize them. It's a royal pain," McGregor says. But now that 3G connectivity is becoming more prevalent, wireless carriers are finding that having devices such as netbooks or the iPhone helps them sell their services, McGregor continues.

Effects Of A New Business Model

McGregor predicts that the potential new business model will affect consumers and enterprises in positive ways. For starters, if carriers were to sell devices in addition to data plans, consumers would benefit from ease of use, McGregor says. "If you're buying a device with a data plan, you know that the device is going to have connectivity and support built into it," he says. "You're not going to have to buy a card, and you don't have to download software. You know it works, and you don't have to go off and do any special things to connect it." Better pricing may also be a benefit, McGregor says. "As more bandwidth rolls out, and as more devices roll out, you're probably going to look at different business models and a lot more bundling," he says. Carriers that offer mobile devices are currently only subsidizing netbooks by \$50 to \$100. "But that's still \$50 to \$100 off from what it would be if you went and bought it from a store," McGregor points out. "The consumer should eventually get a break in terms of connecting all these devices and getting more competitive services at a lower price."

Enterprises will also benefit from ease of use and better pricing, as IT managers can purchase mobile devices and data service plans from one vendor rather than multiple vendors. "When you combine the services, you're also going to get a lower cost," McGregor says.

by Kris Glaser Brambila



SIX QUICK TIPS

Better Understand Bandwidth & Your Enterprise’s Needs

Find New & Often Free Ways To Unclog The Pipes

by Bruce Gain

• • •

IF YOU ARE READING THIS ARTICLE, your enterprise’s bandwidth usage could probably be better. In many cases, surging demand for video, voice, and data applications often saps resources and clogs pipes before network managers have time to react. However, there are actions admins can take to improve bandwidth management without spending extra money.

Limit Email To Text

Colorful graphics of company logos and other images might be nice to look at, but do they really serve a purpose other than unnecessarily clogging up network resources? According to Joe Skorupa, a research vice president for Gartner, enterprises can reduce the amount of bandwidth they use for email services by 80% by simply having users include only text in the body of their email messages.

“Restricting email to text is an obvious way [to save bandwidth] that no one does,” Skorupa says. “In the body of an email, there are almost always rich forwarding, graphics, company logos, and everything else when, instead, just plain-old everyday text will work fine.”

Removing unneeded graphics from in-house applications can free up bandwidth, as well. Whether it is a content management system, accounting, or other application that is shared on the LAN or

offsite over the Internet, company logos or other large graphics that appear on the interface serve no other purpose than just to look nice. “You really don’t need a company logo that is 500 kilobytes,” Skorupa says. “Everybody knows what the company logo looks like.”

Get Policy To Work

Sometimes technology is not the right answer when it comes to managing bandwidth, Skorupa says. Instead, it is about putting forth the right policy. “It is not acceptable to download movies on your laptop while you are at the office. Even if you are accessing a site that isn’t blocked because we haven’t heard about it yet, if we catch you downloading movies, the gateway will notice, and bad things will happen to you,” he says. “When people violate policy, you have to smack them upside the head in a loving, people-friendly manner.”

“Operationally, it has been proven that the best-managed organizations do not police bandwidth usage to the point where employees are too scared to check out a Web page. That is ridiculous,” says Ennio J. Carboni, president of network management for Ipswitch (www.ipswitch.com). “However, enforcement of general policies helps heighten productivity levels, and that is a large operational benefit.”

Also, the concept of “block and allow” is no longer applicable, says Jim

Schriver, director of new technologies for Black Box Network Services (www.blackbox.com). “The better way to address content and bandwidth is through a more thoughtful approach,” Schriver says. “You may only block a small handful of sites, but you may ‘shape’ the rest of the traffic to best suit your organization. An example is a digital printing company, [which] may want to prioritize its peer-to-peer file sharing communication but limit its social networking traffic.”

Add A Secure Web Gateway

Enterprises, of course, need a firewall to protect the network from the outside world, but firewalls can’t replace devices like a secure Web gateway can, Schriver says. “These devices are specialty appliances meant to enhance the user experience with the existing bandwidth of any organization,” he says. “They help filter out inappropriate content and speed up critical applications or users.”

Millions of workers cannot resist the urge to check out their Facebook pages or other popular social networking sites during work time, and occasional access is usually not detrimental to overall productivity. However, a secure Web gateway can go one step further by limiting access to a certain amount of bandwidth for Facebook and other similar sites. “You cannot eliminate access to social networking media sites, which can be very bandwidth-intensive, so you simply decide how much you are willing to give with a secure Web gateway on an [enterprise-wide scale],” Skorupa says. “Users can’t watch the Olympics on their PCs along with 300 of their closest friends at the office, because you allow only 10% of bandwidth to be consumed by social media sites.”

Analyze Those Packets

Some enterprises might have complex monitoring tools in place, but no one is taking the time to closely watch and analyze

Thriftiest Tip:

Renegotiate Service Contracts

One upside to the current business climate is that carriers are willing to negotiate prices, making it easier to reduce bandwidth-access charges. “Sometimes the right answer is to buy more bandwidth because it is so bloody cheap,” says Joe Skorupa, a research vice president for Gartner. “When times are tight, we have seen people go out and renegotiate their service contracts with their service providers. When adding another year to a service contract, for example, we have seen reductions in bandwidth prices by 40%.”

Most Practical Tip:

Prioritize Traffic

An example of a worst-case scenario is when unnecessary email usage and Web site access bog down mission-critical apps. To keep this from happening, admins should prioritize certain applications by making sure they have all of the bandwidth they need, says Jim Schriver, director of new technologies for Black Box (www.blackbox.com). “As companies move some of their internal applications to a hosted environment and their phone system from a traditional PBX to VoIP or a UC system, they are intermingling mission-critical and time-sensitive packets, such as VoIP, Sharepoint, hosted CRM, videoconferencing, and others with less time-sensitive communication like social networking or email,” Schriver says. “Being able to identify these types of traffic and prioritizing one over the other is the new paradigm.”

where and how bandwidth is used. However, monitoring tools used to scrutinize data packets might reveal areas where a significant amount of bandwidth is being wasted. “People can take up a lot of bandwidth and not even know it,” says John Matzek, co-CEO of Logic IT Consulting (www.logicitc.com).

“In one extreme example at a client enterprise, a packet analyzer revealed that half of the packets sent through a router were coming from one computer out of 300 machines,” Matzek says. “It turned out it was sending email-related packets, probably sending out spam. Ironically, the packets were not getting beyond the firewall, which was blocking it all. All it was doing was saturating the link.” ■

BONUS TIPS

■ **Activate cache mode for email clients.** One way enterprises can free up bandwidth is by running their email clients in cache mode, says Joe Skorupa, a research vice president for Gartner. “Outlook has a cache mode that only downloads stuff when you look at it,” he says.

“When you do that, you don’t get that crunch the first thing in the morning when people turn on their PCs.”

■ **Stock up on bandwidth now.** Instead of buying more bandwidth from carriers after bottlenecks occur, now is the time to project how much

bandwidth you will need in the future. If demand is expected to rise, why not get ready by having faster pipes in place before that day comes, Skorupa says. “You can get the bandwidth optimizations done ahead of time, knowing [bandwidth usage] will eventually creep back up,” he says.

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FEATURE PACKAGE

Companies To Watch

We highlight four companies we think are worthy of your data center's attention.

Environmental Monitoring Expertise | 25

■ AVTECH is a worldwide manufacturer specializing in environmental monitoring equipment that keeps an eye on data center facilities, monitoring for any potentially dangerous changes in temperature, humidity, power, and more.

Flexible Network Control | 26

■ Avenda Systems meets the concern over unpredictable and unauthorized access head on.

Affordable Fire Suppression | 26

■ Fire suppression solution provider FireXonline says its solutions are superior to water sprinkler systems and are available for a significantly lower cost than pre-engineered fire suppression alternatives.

Powerful Firewall Protection | 28

■ Palo Alto Networks builds what it calls a next-generation firewall. Rather than allowing or denying traffic based on what port it's coming in on, it allows or denies traffic based on what the application is.

Environmental Monitoring Expertise

AVTECH Gives Admins Peace Of Mind That Their Facilities Are Protected

by Chris A. MacKinnon

THE ANXIETY THAT IT and data center managers experience when they realize it's "too late" to protect critical data and equipment is considerable. The good news is there's a company that specializes in making sure your IT environment is always protected. AVTECH specializes in environmental monitoring equipment that keeps an eye on data center facilities, monitoring for potentially dangerous changes in temperature, humidity, power, and more.

According to Michael Sigourney, senior product specialist at AVTECH (www.AVTECH.com), some of the company's customers include many of the world's most secure data centers and other recognized facilities, including the White House and Pentagon. AVTECH's main offerings are its TemPageR (temperature monitor) and Room Alert (critical environment monitors) products, which let IT admins monitor environmental conditions such as temperature, power failures, flooding, smoke, and fire.

Sigourney presents the scenario of walking into your data center on a Monday morning after a relaxing weekend away with family, only to find that there was an incident outside the office building that knocked the power out in the entire office. "As you enter the data center, you find that the backup generator you installed last month

did not turn on, and the \$50,000+ worth of equipment you were storing is dead and all your information is lost," he says. With AVTECH's protection, Sigourney says, you're alerted and can take automatic corrective action to avoid this scenario, ultimately saving you time, money, and possibly even your job.

The Industry In AVTECH's Eyes

At the root of any business operation is its IT infrastructure, Sigourney says, whether large or small. He elaborates, "In a world that is so dependent on the Web and other communication technologies to perform simple, everyday tasks, what happens in the data center can either make or break an organization's success."

He says that for many years, data center managers have focused on establishing disaster recovery plans to return a business to normal operation as soon as possible after a catastrophe. "However, little has been accomplished to establish proactive disaster prevention plans that can prevent the catastrophe from occurring at all," Sigourney says. "In many cases, tens or even hundreds of thousands of dollars worth of equipment can be damaged and then need to be replaced and reconfigured as part of the

disaster recovery 'plan.'" Sigourney says in today's seemingly unstable economy, protecting the assets and infrastructure of a business from costly disasters is critical.

"If you proactively monitor environments that house expensive equipment and you are able to take automatic corrective action when an issue occurs, you can potentially save your organization tens to hundreds of thousands of dollars in lost business [and] equipment repair or replacement," Sigourney says. "It's for this reason that AVTECH is committed to working with organizations around the world to implement a proactive disaster prevention approach using Room Alert, TemPageR, and our other products." He says that, with customers around the world, AVTECH is pleased to lead the market in technical developments in the area of IT and facilities environment monitoring.

Product Lineup

According to Sigourney, AVTECH offers modular solutions that fit any environmental monitoring need. Products range from tem-

perature-only monitoring products (starting at \$225, including firmware, software, sensors, and support) to high-end wireless models (\$995, also including firmware, software, sensors, and support). Sigourney says all AVTECH products include licenses for the company's powerful PageR Enterprise and Device Manager software as well as the first year of MSUS (Maintenance, Support, and Update Services) at no charge.

A quick rundown of the company's products reveals a list of items that are useful to small and mid-sized enterprises. Take the Room Alert 26W, for example: AVTECH's most advanced hardware solution monitors the environment, alerts you when issues arise, and offers automatic corrective action and wireless sensor monitoring.



Company Information

Company Name: AVTECH Software
Location: Warren, R.I.
URL: www.AVTECH.com
Date Company Founded: 1988

Interesting Fact


AVTECH serves more than 80% of the Fortune 1000 companies.

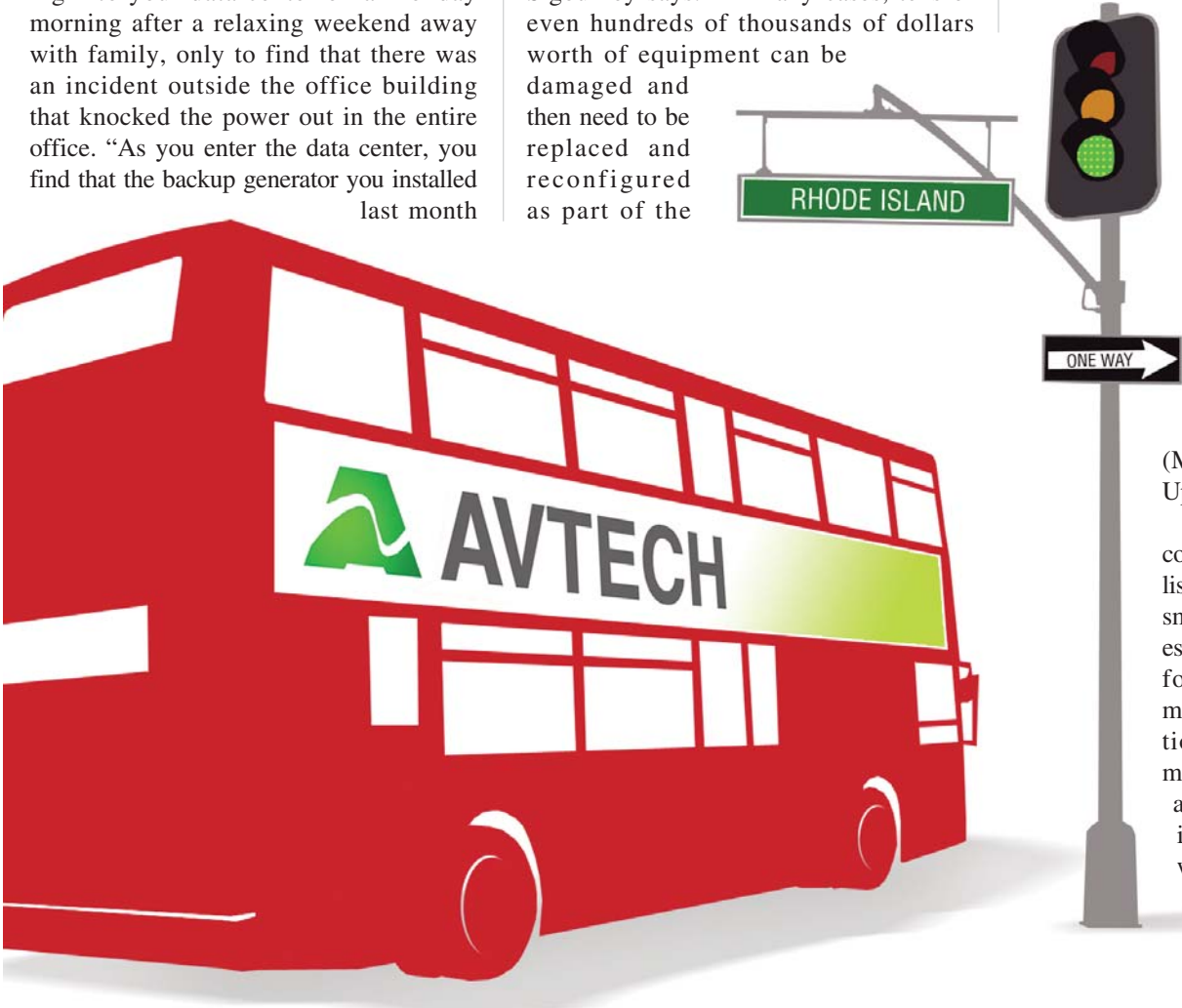
The device can monitor up to 86 total sensors and can also send alert notifications via email, email-to-SMS, and SNMP to PCs, mobile phones, iPhones, BlackBerrys, and PDAs. Other Room Alert models offer the same protection; the main difference is the number of sensors that each one hosts.

According to Sigourney, AVTECH's products offer IT managers a proactive approach to monitoring the environments in their data centers and other facilities. He says that malfunctioning air conditioning or inadequate cooling continues to be the biggest threat to infrastructure in the data center, followed by power interruption and water or flooding. He says these environmental threats are typically invisible until disaster strikes. "When it does," he says, "the immediate response of Room Alert or TemPageR can save the day."

Bright Future

Sigourney says AVTECH is set to release several new environmental monitors at both the high and low ends of the company's product line. "We will continue to expand and promote the Room Alert and TemPageR brand names as industry leaders for function and reliability," he says. "New sensors are in development and will be released soon to broaden end-user options and increase the benefits to a myriad of customer types." He also says that AVTECH will continue to invest in research and development to remain the worldwide technology leader in the IT environment monitoring field.

As the industry leader, AVTECH isn't afraid to try something new, either. "With continued development and improvement to our software, we listen to customer feedback and we are always releasing new and improved hardware to make the monitoring and management of today's data centers and facilities easy and cost-effective," Sigourney says. "Our dynamic product line and commitment to our customers enables us to serve over 110,000 end users at more than 35,000 organizations across 104 countries and Antarctica." Sigourney says that what really sets AVTECH apart from the competition are its cutting-edge technology, commitment to customers, and powerful software. 



FEATURE PACKAGE

Flexible Network Control

Avenda Systems Helps SMEs Authenticate Devices Before They Cause Network Damage

by John Brandon
• • •
EVEN IN A well-controlled IT environment, unauthorized clients and suspicious malware almost always seem to sneak through the cracks: An employee who usually logs in at the office decides to authenticate from home using his own broadband connection, or a programmer with an iPhone decides she wants to check her email—just for a minute—using a public network in a coffee shop. Locking down these connections requires a detailed plan of defense, because one day, that one scenario could compromise security and make sensitive company data open to all parties.

“One primary concern that needs to be resolved is the ability to do a health check on any device before it even enters the network,” says Santhosh Cheeniyl, founder and vice president of engineering at Avenda Systems (www.avendasys.com). His company, which he founded in 2006, decided to meet the concern over unpredictable and unauthorized access head on.

Cheeniyl worked originally at Cisco, where he saw the opportunity to address network security in a new way. Soon after working on an initial product to perform health checks on devices seeking to authenticate on a network, Cheeniyl was

just two weeks away from showcasing the new product at an RSA conference when Microsoft announced a new technology related to network access control. Cheeniyl immediately set to work, and his company engineered the product to support the new technology.

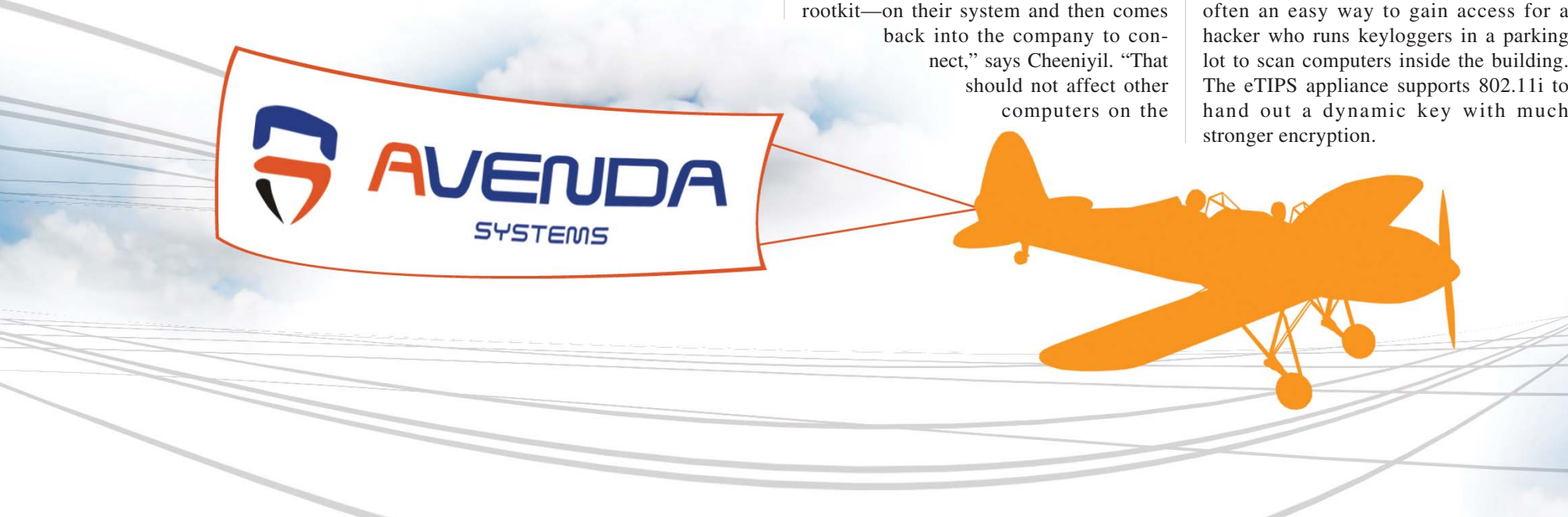
Preconnecting To The Enterprise

That first product forms the basis for the company as a whole. Called eTIPS, the network appliance is geared toward companies of any size that need to protect their IT investments from intrusion.

“Let’s say an employee goes to a hotspot and gets a worm or a virus—or worse, a rootkit—on their system and then comes back into the company to connect,” says Cheeniyl. “That should not affect other computers on the

network. eTIPS is a preauthentication appliance that tells the admin who has tried to log in, performs a health check to make sure there was a recent virus scan run on that computer, and has the latest antiviral and anti-malware protections in place. If the computer or device does not check out, the device can be quarantined for a scan and to have an infection cleaned.”

Cheeniyl says companies also use eTIPS to perform wireless access security. Cheeniyl says the days when you could just hand out an encryption key for access to company networks is long gone—or at least should be a distant memory. This “shared secret” approach is often an easy way to gain access for a hacker who runs keyloggers in a parking lot to scan computers inside the building. The eTIPS appliance supports 802.11i to hand out a dynamic key with much stronger encryption.



Affordable Fire Suppression

FireXonline Offers Effective Solutions For Room-Wide & Rack-By-Rack Protection

by Bruce Gain
• • •
DATA CENTER MANAGERS usually have two options from which to choose when selecting a fire protection solution: water sprinkler systems or pre-engineered chemical-based suppression agents. When a fire or smoldering smoke is detected, a water sprinkler system can certainly be effective; however, the servers and data are often destroyed in the process, and in some cases, water damage can do more harm than a small fire would. Then there are pre-engineered suppression systems, which can be highly effective for extinguishing fire-hazard sources with often little damage to equipment, yet are often costly to install. However, fire suppression solution provider FireXonline says its solutions are superior to water sprinkler systems and are available for a

significantly lower cost than pre-engineered fire suppression alternatives.

“FireXonline has come to understand that our inquiries increasingly come from small to medium-sized data centers whose operators find it prohibitively expensive to install clean-agent or pre-engineered suppression systems,” says Gerry Flood, vice president of FireXonline (www.firexonline.com).

The SME Data Center Niche

FireXonline approaches data center needs by tailoring its products and fire protection installation services to what it says are new data center dynamics. Previously, for example, Flood says computer rooms were larger and relied on hazardous Halon 1301, which required evacuation by personnel when deployed due to the toxicity of the chemical agent. Now, however, data center equipment and server racks are more

condensed and EPA-approved extinguishing agents are required that are not hazardous for personnel when discharged, Flood says.

Effective fire-extinguishing chemical agents that meet EPA and other standards, which Flood says FireXonline offers, must be able to terminate fire sources in small and dense server racks with nontoxic chemical agents. “When uninterrupted operation of sophisticated, expensive, and complex equipment is required for a corporation or government agency to maintain operations, then new and more effective types of fire protection [are] required,” Flood says.

FireXonline originally offered its consultancy services and products to the specialty fire protection needs for historical buildings, atomic waste disposal sites, storage warehouses, and other applications around the world. However, the firm has more recently

begun to offer EPA-friendly fire protection agents and its services to meet the needs of increasingly dense server racks for small to medium-sized enterprises. It has since offered its products and services to data centers around the United States and in Africa.

Specialty Partnerships

Although FireXonline researches and determines how its specialty fire protection services can best meet data center needs, the firm has also partnered with third parties that offer specific specialty products, which FireXonline in turn offers to its customers.

“I have always looked for niches that allow me to market products when there are specific benefits for the customers. I have always tried to find ideal products to meet



Company Information

Company Name: FireXonline

Location: Clawson, Mich.

URL: www.firexonline.com

Date Company Founded: 2004

Interesting Fact

FireXonline installed 300 fire extinguishers in the London subway system.

Cheeniyl says a third reason the product has caught on in the enterprise has to do with guest access. It’s often difficult to manage guest logins and maintain security, but the appliance can be used to provide dynamic keys for guests, as well, providing varying levels of network access or just an Internet feed.

Cheeniyl also mentions the Quick1X product, which allows end users to easily authenticate through an 802.1x server, which is usually a complex process. Quick1X acts as a wizard to guide users through the authentication process, making it easy on them but also maintaining a high level of security.

Future Innovation

In the coming months and leading through next year, Cheeniyl says one area of future innovation will center on adaptive policy provisioning, which is essentially a way to ramp up client provisioning rules as a company grows. This is one innovation that will be particularly appealing to an SME because the work to set provisioning levels is often tedious or even overlooked. For example, when the company is small, it might set one series of rules about provisioning clients; then, as the company grows, the provisions

might need to change and expand to segment network access or add new policies. Adaptive policy provisioning provides a way for an SME to control network access with more flexibility.

Cheeniyl says Avenda is also working on a client dashboard that works like a command and control center, providing a view into the entire organization for monitoring and provisioning.

“You can know everything that is going on across the network,” says Cheeniyl. “This includes which computers are attached and which handhelds are attached. You could point to a device and say, ‘Get this device off my network.’ The standards around this are not all baked together yet, but we are working on providing a network admin control over network access from a central console.”

Industry Concerns

Cheeniyl says one of the key concerns in network security has to do with the proliferation of advanced networking software used by hackers and the ever-increasing high-end performance of end-user machines—even off-the-shelf laptops with quad-core processors. He says there is a growing need to counter this new assault with ever more vigilant security tools.

He says that some security tools are just not up to the challenge. They might try to block MAC address spoofing



Company Information

Company Name: Avenda Systems
Location: Santa Clara, Calif.
URL: www.avendasys.com
Date Company Founded: 2006

Interesting Fact

Avenda received initial attention at an RSA conference for supporting a brand-new Microsoft technology.

but are ill-equipped to look at the fingerprint of a hacker technique. For example, some security tools can only see that a MAC address for a printer seems safe, but advanced tools can tell if a hacker has spoofed the printer MAC address based on suspicious activity.

“Our product can look beyond just the MAC address and see what OS is running on the printer—is it the one HPO normally uses, or does the device act like a printer?” says Cheeniyl.

In the end, this kind of robust security is a growing need in IT, one that Avenda is ready to meet.



niche needs [through partnerships with third parties],” Flood says. “When it comes to server rooms, obviously that business is growing and will continue to grow, and I have found products that are critical for specific fire suppression operations.”

One of FireXonline’s partnerships is its alliance with UK-based Redetec (www.redetec.co.uk). FireXonline selected Redetec’s rackmount fire suppression product in order to offer customers the ability to better pinpoint fire hazards that need to be extinguished on a rack level. Instead of dousing the entire data center with a chemical agent, Redetec’s product puts out fires inside the service rack. “[Redetec’s solution] locates the [fire] inside the rack at the point likely to be the problem and is capable of suppression long before a typical room system even knows that there is a fire and can react,” Flood says. “Fire suppression inside the cabinet is a first line of defense, instead of waiting for the system installed in the room to go off, after much of the damage is done.”

FireXonline is also introducing OnGard suppression units for server racks, electrical cabinets, and other applications. “The OnGard unit uses linear heat-detection tubing that ruptures at the point where the flame [is located] and discharges the agent directly onto the fire,” Flood says.

OnGard is a niche-oriented product that offers pinpointed fire detection and suppression capabilities inside server racks,

and the product also meets the needs of data centers “where tight budget restrictions are in place,” Flood says.

Mini Data Centers

Servers and data centers in general are quickly becoming denser, as more computing power and smaller components are packed in increasingly smaller blade server cabinets, which Flood says is a core market for his firm. But in addition to this trend is what Flood says is an emerging modular approach that data center managers are taking when designing computer rooms. Many firms, for example, are increasingly using shipping containers and other small compartments to serve as small computer rooms or “mini data centers,” Flood says.

For this niche need, Flood says FireXonline has begun to offer clean agent units otherwise designed for marine applications in ship engine rooms. These fire suppression units were originally designed for engine room enclosures up to 1,500

cubic feet and were designed to suppress Class B and C hazards, which Flood says also makes them a perfect fit for smaller server rooms. “These units,

while not as sophisticated as pre-engineered systems, protect server rooms for 33 to 50% of the cost [of pre-engineered systems],” Flood says. “Because they are approved by Underwriters Laboratories, they can be used for any other structure—including, of course, small server rooms.”

The main selling point is the price, Flood says. “There are two options for these small computer rooms: [An SME] can spend \$12,000 to \$15,000 on pre-engineered pipe systems that everyone thinks is the way you protect the server room, but we can put a unit on the wall that essentially does the same thing, saves you up to 60% of the cost, and allows you to put protection in there that you might not otherwise be able to afford.”

FireXonline has ambitions to become a leader in protecting small server rooms, Flood says. “Our cost-effective solutions will allow a better degree of protection for budget-constrained organizations and limit critical downtime due to fires,” Flood says.

Sprint Finalizes iPCS Acquisition

The Federal Communications Commission and Public Service Commission of West Virginia OK’d Sprint Nextel’s acquisition of iPCS. The transaction gives Sprint the ability to roll out 3G and 4G with less pushback from other companies. According to the agreement, Sprint will take over iPCS shares at \$24 per share and pay \$426 million in total acquisition costs and will also take over \$405 million of iPCS debt. Sprint will work to finalize the deal by the first quarter of next year. The acquisition will also settle issues regarding Sprint’s operation of the iDEN network.

EU Files Charges Against CRT Makers

The European Commission has filed formal antitrust charges against several CRT manufacturers suspected of operating a cartel. Although the commission did not name any of the companies it has charged, Dutch electronics company Philips confirms it received the commission’s statement of objections. The commission began investigating the accused companies two years ago after customers alleged that Philips and five other manufacturers were working together to fix prices on display tubes used in computer monitors and color picture tubes used in televisions. The manufacturers can defend themselves in writing and at an oral hearing before the commission decides to levy fines, which could be up to 10% of the manufacturers’ global turnover for each year the alleged cartel operated.

EMC To Reorganize Its International Business

Network storage company EMC announced that it is reorganizing its international business units in an effort to streamline its operations and consolidate the multiple entities it has established through acquisitions during the past few years. In addition to improving operational efficiency, the restructuring will provide EMC’s U.S. headquarters with about \$4 billion in cash and stock; however, the reorganization will also cost EMC a \$100 million charge in Q4. The company says it does not expect to eliminate any jobs or close offices as a result of the changes.

Nokia Sues Monitor Manufacturers

Nokia, the largest international mobile phone producer, is suing manufacturers of LCD and CRT monitors, claiming it’s a victim of price fixing. The defendants include Chunghwa, LG, Philips, Samsung, Sharp, and Toshiba. Some companies, such as Sharp and Hitachi, have confessed to participating in global price-fixing. Although Nokia is not naming a dollar amount, the alleged price-fixing occurred between Jan. 1, 2006, and Dec. 11, 2006. In October, Nokia also filed a suit against Apple claiming the computer maker violated 10 Nokia patents with the iPhone.



Intel Labs Reveals 48-Core Chip

Intel unveiled an experimental 48-core CPU it calls a “single-chip cloud computer” that will improve performance and efficiency in future data centers. The new chip is the second generation of Polaris, which Intel released two years ago. Intel CTO Justin Rattner said the new chip shares some features with the company’s upcoming Larrabee GPU microarchitecture. Intel engineers also developed new power management techniques that allow the 48-core chip to operate on as little as 25W, about the same as Intel’s current Core 2 and Nehalem-based processors. Intel will share about 100 of the chips with industry and academic partners for use in research.

FEATURE PACKAGE

Powerful Firewall Protection

Palo Alto Networks Specializes In Firewalls That Do More With Less

by Holly Dolezalek

FIREWALLS FIRST came out in the late 1980s when security breaches drew attention to the need to make networks more secure. In those early days, just having a firewall made a network more secure, because hackers hadn't yet written applications that could get around it. But as hackers have created new applications, the firewall has become like a utility belt with more and more necessary gadgets—URL filtering, content filtering, intrusion detection—to block new threats that can dodge the firewall's port-based security.

Then came unified threat management, or UTM, the practice of putting all those gadgets in the same box as the firewall. Vendors touted the benefits of UTM, suggesting that the one-box solution was the way to have a simpler but more effective security infrastructure.

But to Chris King, director of product marketing for security software provider Palo Alto Networks (www.paloaltonetworks.com), UTM was just putting old code in new boxes. "The way that traditional firewalls have denied or allowed traffic is by network port, but applications stopped respecting their assigned port years ago," says King. "So organizations have had to add more and more to the traditional firewall to help it do what it's supposed to do. Our position is to stop with the Band-Aids and fix the core problem."

Palo Alto has done so by building what it calls a next-generation firewall, which shipped for the first time in 2007. Rather than allowing or denying traffic based on what port it's coming in on, it allows or denies traffic based on what the application is. "A traditional firewall might allow traffic over port 80 in a designated IP address range," King says. "Ours identifies the application and which user or group of users is using it. So, for example, an organization can use our firewall to allow Skype only for international sales reps."

Comprehensive Offerings

Palo Alto's firewalls include App-ID, User-ID, and Content-ID. App-ID can identify applications regardless of the port or protocol they use and detect them even when they try to tunnel through other applications. User-ID works with Active Directory to maintain links between users, groups, and the IP addresses they're using so as to be able to detect who is using what application. Content-ID uses a URL database and stream-based scanning to keep an eye on file transfers, threats, and Web surfing. All of the firewall's functions are

architected for parallel processing and low latency so that increased security doesn't mean slower networks.

"UTM put a lot of functions in the same box, which was nice, but if you don't have the right architecture, it's going to have a much higher performance hit when you start turning on threat detection, antivirus, or URL filtering," King says.

The company has three series of firewalls, which offer varying maximum numbers of sessions and network speeds. For example, the PA-500 has 250Mbps of throughput and can handle up to 64,000 sessions, while the higher-end models in the PA-4000 series offer 10Gbps of throughput and up to 2 million sessions.

Its integrated architecture is what makes Palo Alto's firewalls "next-generation" firewalls, King says, and it means that organizations that install them can get rid of those extra boxes that have been running along with the firewall.

"If you go into a traditional enterprise's data center, you're going to find them running a firewall, an intrusion detection system, a URL filter, [and] maybe four or five types of boxes for their security infrastructure, along with the firewall," King says. "When you fix the core problem of the firewall, it makes all those boxes unnecessary."

Doing More With Less

Data center managers are under all kinds of pressure these days, but one particular type of pressure is to find ways to make the data center more green—or at least to cost less green. At the crossroads of those mandates is power usage, and King says that the reduction of power usage for environmental, financial, or both is a top-of-mind concern for a lot of managers he talks to. It's one of the priorities that he hopes will make Palo Alto's firewall more attractive to potential customers. "Managers are looking at virtualization, consolidation of servers, the cloud, and other technologies," he says. "They really like hearing that they can reduce the number of boxes they use to deliver their network security and gain functionality while greening the data center a little because they don't have to use as much AC to keep everything cool."

They also like hearing about being able to do more with less in the sense of being able to automate as many tasks as possible so that IT staff can be deployed to other assignments. Here, too, King says, the firewall has more than security benefits, because it's able to block applications that older firewalls would need more help with. "For example, you might need 20 different firewall rules to block one P2P sharing application," King says. "But with our firewall, it's possible to block all P2P applications—40 of them, right now—with a single rule. It's possible to go from 3,000 rules on a checkpoint device to about 250 on one of ours."

Data Security

In the data center world, with more and more organizations handling credit card data, the PCI (Payment Card Industry) security standards are becoming more prevalent as a responsibility for managers.




Company Information

Company Name: Palo Alto Networks
Location: Sunnyvale, Calif.
URL: www.paloaltonetworks.com
Date Company Founded: 2005

Interesting Fact

When installing its firewall for the first time, one of Palo Alto Networks' customers discovered that someone on the network was spending company time to play World of Warcraft . . . and that someone was the CEO.

Any organization that handles credit card data must meet these standards and must demonstrate compliance with an audit.

King notes that the network segmentation capabilities of Palo Alto's firewall have made it more attractive for customers that are or may soon be trying to maintain PCI compliance. "If you have cardholder data and need to get compliant, if you have a flat network, the whole network is going to be in scope for the PCI audit," he says. "But if you segment your network, then only the segments that contain the cardholder data will be in the scope of the audit. So our customers have used our firewall to do some internal segmentation; for example, they might set it up so that only financial people who are using a certain Oracle application can get into that segment. That reduces the time and cost of preparing for and having the audit." 



Lower TCO, Higher Performance

Adaptec MaxIQ SSD Cache Performance Kit Improves Application I/O

by Seth Colaner & Corey Russman

• • •

“TOTAL COST OF OWNERSHIP” is often the name of the game in today’s data center, and IT managers are always looking for means of lowering TCO as they require high performance and scalability.

Adaptec’s MaxIQ™ SSD Cache Performance Kit is designed to accelerate the performance of application I/O by up to five times that of traditional hard disk drive-only arrays, all while lowering capital and operating expenses. It does so by using less hardware to generate greater I/Ops, which reduces the need for additional hardware as companies scale upward.

The kit is Adaptec’s next step in its data conditioning capabilities, which include unified platform management,

zero maintenance, power management, intelligent data routing, and data protection, all between the I/O of servers and storage.

Large-Scale Apps

If your enterprise is like most, you run any number of large-scale applications, including databases, Web servers, file servers, and email. MaxIQ can be of great benefit for such read-intensive applications. In benchmark tests, the MaxIQ SSD Cache Performance solution provided:

- **Up to 11X performance improvement** in small block random read workloads
- **Up to 5X performance improvement** in Web server workloads
- **Up to 5X performance improvement in application response times** in a Web server application environment

- **Up to 2X the number of users** with improved response time in a real-world Web server application environment

How does it do this? MaxIQ SSD Cache Performance Kit works with Adaptec Series 2, Series 5, and Series 5Z storage controllers for SATA and SAS drives and combines the best of both solid-state and hard disk drives into a technology called High-Performance Hybrid Arrays. With MaxIQ, you will benefit from SSD’s higher read bandwidth, higher I/Ops, and greater mechanical reliability and worry less about the weaknesses of SSDs, including limited capacity and lower streaming write bandwidth.

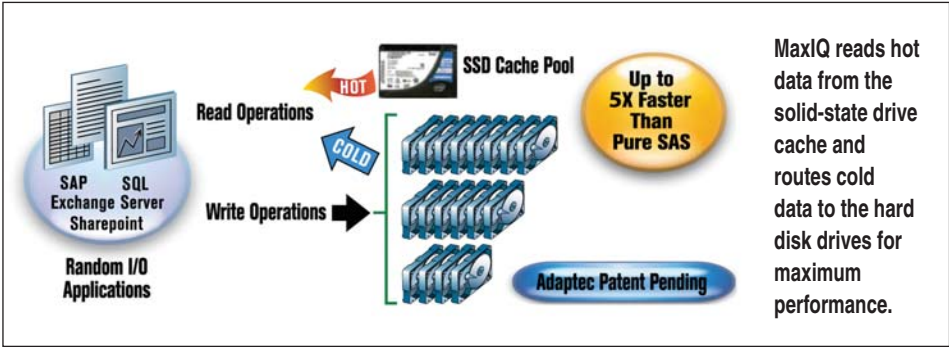
The kit combines Intel®-powered MaxIQ solid-state cache drives with MaxIQ SSD Caching Software, virtually eliminating the potential for bottlenecks between CPUs, memory, and storage.

By leveraging an SSD-based caching architecture, the kit is application-agnostic and avoids any need to change storage architectures, application software, or OSes. The kit is designed for seamless integration into any industry-standard platform.

With a High-Performance Hybrid Array and MaxIQ SSD Cache Performance solution, you’ll benefit from:

- **Reduced capital expenditures.** Increase the number of transactions and users hosted per server and lessen the need for additional equipment.
- **Reduced operating expenses.** By deploying fewer servers and storage systems, you can cut maintenance and energy costs.
- **Uncompromised data protection.** All data is stored on hard disk drives with data protection algorithms; data stored in the SSD cache is simply a copy of stored data.

- **Simplified integration.** No application-specific tuning, software rewrites, or user intervention needed.
- **Improved SSD consistency and reliability.** Data is written to the hard drive and copied to SSD only when there’s a potential benefit to the application, reducing wear on the SSDs



Learned-Path Algorithm

One unique feature of the MaxIQ system is its use of Learned-Path Algorithm technology, which recognizes data that is frequently read and replicates it in an SSD cache so it can retrieve the data even faster when it’s requested. With MaxIQ, you’re guaranteed maximum storage efficiency, as the software updates “hot” cached data on subsequent writes to the same blocks.

Adaptec MaxIQ SSD Cache Performance Kit

Lets you convert industry-standard servers into cost-effective, scale-out application storage appliances.

Starts at \$1,295

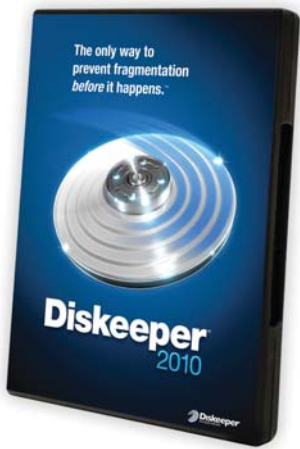
(800) 442-7274

www.adaptec.com/MaxIQ

DISKEEPER 2010

NEW PRODUCT

by Seth Colaner



Diskeeper 2010

Features an IntelliWrite technology that prevents almost all fragmentation from occurring and maximizes system efficiency, reducing energy and cooling costs. Diskeeper 2009 Pro Premier: \$99.95; Professional: \$59.95

FILE FRAGMENTATION has long been a headache for computer users, and in an enterprise with large numbers of computers to constantly defragment, IT workers often see their time gobbled up by the need to defragment company computers. It is maintenance that can’t be overlooked, but it’s a time-consuming task.

Although advancements in defragmentation convenience include the ability to schedule maintenance on individual computers

and even automatic defragmentation from third-party vendors, defragmentation can still be an often-neglected task.

Diskeeper looks to solve the problem of fragmentation with Diskeeper 2010, an application that intelligently writes files to disks and prevents file fragmentation in the first place. Diskeeper 2010’s IntelliWrite feature accomplishes this task by helping IT workers avoid the task of manually defragging or even having to schedule maintenance.

Diskeeper 2010 with IntelliWrite is designed to not only avoid unnecessary maintenance time spent by employees, but also to reduce energy and cooling costs by maximizing system efficiency. If disks do not have to work hard writing fragmented files to the disk, they’re spinning

less, consuming less power, and generating less heat. Further, with less use, drives will last longer, providing a better ROI for companies and reducing overall hardware costs. In the event that fragmentation does occur, Diskeeper 2010 can fix the problem.

Popular Feature

IntelliWrite is a popular feature. According to Joseph L. Marion, principal at Healthcare Integration Strategies, “I am very impressed with Diskeeper 2010, particularly the IntelliWrite feature. I do a lot of speech recognition and noticed a big difference, as IntelliWrite addresses fragmentation proactively. This is a major advantage for disk-intensive applications.” Marion says he noticed a performance improvement within a single day of use.

Performance-wise, users will experience faster read/write times, as data will be better organized on disks. Better data organization results in more free disk space.

David Yohn, Ph.D., director of Marchi Thermal Systems, says, “There are several interesting and useful improvements in Diskeeper 2010, the most important of which is speed. Not only does the IntelliWrite technology speed up disk defragmentation since it prevents fragments from occurring, and not only does the software simply perform its functions much faster than did earlier versions, the benefits of improved disk optimization means the systems run faster all the time.”

I-FAAST File Access

With Diskeeper’s I-FAAST (Intelligent File Access Accel-

eration Sequencing Technology), Diskeeper 2010 optimizes file placement so users can access more frequently used files faster, leading to additional performance benefits.

All of the hassles Diskeeper eliminates and performance benefits it offers seem like they would do a number on system resources, but with Diskeeper’s InvisiTasking technology, the opposite is true. InvisiTasking runs transparently in the background in real time, allowing Diskeeper’s other technologies to do their jobs with no impact on system resources, even during heavy traffic.

Diskeeper 2010 is available for a free 30-day trial. Visit www.diskeeper.com to download the trial version.



(800) 829-6468
www.diskeeper.com

FEATURED COMPANY

Easing The Archiving Process

Qstar Technologies Specializes In Data Archiving Software Solutions

by Holly Dolezalek

• • •

IN THE DATA ARCHIVING MARKET, two approaches come from opposite directions. One approach is to write data to a backup hard drive and use that as both a backup and an archive. The other is to archive it to optical or tape drives. Since 1987, Qstar has been working the media-driven approach.

Qstar (www.qstar.com) gets a healthy 40% of its business from the United States and Asia, with the remaining 60% focused largely in Europe. The company has two main offices, one in Mary Esther, Fla., and the other in Milan, Italy. The bulk of Qstar's 50 employees actually work out of the Milan office—the CEO is there, as well—but David Thomson, senior vice president of sales and marketing, works in the Mary Esther office.

Thomson explains that Qstar is a software company, not a total-solution company. It writes the software that runs optical and tape drives and partners with manufacturers such as JVC and SpectraLogic for optical libraries and tape.

Qstar's niche—shared by other companies in the optical and tape drive media archiving business—is a good one, but its strongest competition these days comes from companies that are promoting hard disk drives as an alternative to media-based archiving. "In our opinion,

offline optical media, as well. For example, Qstar's Master software helps users to manage libraries of DVDs or CDs, either offline or in an automated optical library.

Qstar also offers migration services for companies that are migrating from an older storage system to a new one, such as when hardware, file formats, or operating systems become obsolete.



Additionally, the company offers a series of network-attached storage appliances. SntrySTR, for enterprise storage management, supports RAID, optical, tape, and CAS; SntrySTR Xpress is for storage management in the SME market and supports RAID and Blu-ray. SntryML

Qstar's overseas sales are primarily accomplished by its network of 150 resellers worldwide. The company employs some direct sales personnel, but they assist resellers in making sales rather than making cold calls. "Our salespeople support the channel by being experts in our products," Thomson explains. "They get involved in meetings with end users or give product updates to OEMs and resellers, but ultimately the sale comes through the channel."

Thomson says that 80% of the company's sales come through the channel. The other 20% is through OEMs, particularly in the medical field.

Media vs. Disk

Qstar competes with other media-driven archiving companies, but Thomson notes that its greatest challenge is competing with the marketing budgets of larger companies that promote hard disk drives. "A lot of organizations just put their data on a primary storage disk and put off archiving, which causes problems when they have issues with backing up," Thomson says. "They don't understand that once you've archived, you don't have to worry about backing up. They also don't get that using disk alone can get expensive pretty quickly. Disks spin all the time and use electricity, and you have to use AC to cool the room where those disks are. With removable media, you're not using any power at all unless you're actively reading or writing data, and you can make a couple of copies and store them in different places without having to replicate data to a separate system."

Qstar's other challenge is the economy. Like so many other companies, Qstar is seeing longer lead times and sales cycles. That's because the archiving market has two segments: mandated and voluntary archiving. Some companies have to abide by government or other regulations for how long and in what format they must store their data, but others do not and establish their own guidelines for archiving. In a down economy, some companies are finding savings by changing those guidelines. "We've been doing more business in the voluntary arena, so sales cycles have been taking longer as people consider alternative solutions," Thomson explains.

A Look At Qstar's Offerings

Data Director	Mirroring software that ensures data is replicated continuously across sites and geographic locations and within libraries.
HSM	Archive and data management software platform that can also integrate disaster prevention and remote data management.
Network Migrator & MultiStor	Software that provides server and client data migration services for standalone environments or for archives managed by Qstar's hardware solutions, such as SntrySTR, or software, such as HSM.
SDJ & STJ	Mirroring software that can mirror archive data on magnetic disk storage (RAID, NAS, CAS) and to a secure optical or tape library.

QSTAR TECHNOLOGIES

(850) 243-0900
www.qstar.com

- Qstar makes software programs that aid in removable media-based data backup and archiving.
- The company plans to further extend its reach into the data archiving market in the coming year.
- "We believe in using hard disk appropriately and building a system that meets a company's requirements for archiving without wasting energy and money on an unnecessary amount of hard disk," says David Thomson, senior vice president of sales and marketing at Qstar.

New Storage

Qstar's strategy for the future is to expand its portfolio with products upstream of data archiving. For example, early next year the company will be coming out with a product that does what's called data grooming. The software will look for files that haven't been touched in a certain amount of time and pull those files into the archive automatically. "The end user will still be able to see the file attributes in a stub and also be able to access it, although it will take about 20 seconds instead of being instantaneous," Thomson says.

Another product that will come out in the second quarter of 2010 will be a disk space solution that includes removable media. Thomson describes it as a self-made archive that allows end users to move files that aren't likely to be used to removable media based on policies they set. "We want to give companies the flexibility to choose their own archiving, because everyone has different archiving requirements; even two companies in the same industry don't go about archiving in the same way," Thomson says. "We want to offer flexibility, rather than saying, 'Here's our standard archiving solution, and you'll have to amend your work flow to work with our software.'"

Thomson says Qstar won't do any of that by making acquisitions or by venturing into related areas such as backups. "I don't think Qstar has ever bought another organization," Thomson says. "We develop our own solutions on our own code base and partner with other software companies to create new solutions we want to provide."

“We want to offer flexibility, rather than saying, ‘Here’s our standard archiving solution, and you’ll have to amend your work flow to work with our software.’”

- Qstar's David Thomson

larger organizations are falsely promoting hard disk as a panacea for all evils," Thomson says. "We believe in using hard disk appropriately and building a system that meets a company's requirements for archiving without wasting energy and money on an unnecessary amount of hard disk."

Product Suite

Qstar's flagship product is its HSM (hierarchical storage management) software, which writes data to removable media. HSM is an enterprise storage management suite that works with Windows, Mac, Linux, and Unix. It combines a RAID array with secure optical, tape, or CAS archives and offline media management. It has mirroring and data migration functionality as well as capabilities for replication, encryption, and digital signature.

The company has publishing software that manages data on magnetic disks and

does email archiving with RAID, optical, tape, or CAS, while SntryVTL does back-up tape virtualization with RAID.

Storage Marketplace

Qstar sells in many verticals, but Thomson says Qstar has had a lot of success in markets that have government or internal requirements for archiving data for a particular length of time. "We do well in the financial vertical, such as banking and insurance, and health care and government institutions are our other best markets," Thomson says.

Qstar tends to sell more in the medium-sized to large enterprise market, although the company has some sales in smaller companies. "For example, some of our customers in the financial arena are small brokerages that have to comply with the SEC's archiving rules and need to store their data in a particular format," Thomson says. "In health care, we sometimes have small clinics that need data archiving."

CASE STUDY

Disaster Recovery With Ease

STORServer Safeguards The Data At Dare County Schools

by Sue Hildreth
• • •
AS THE TECHNOLOGY DIRECTOR for Dare County Schools in the Outer Banks of North Carolina, Carl Woody has learned the importance of a backup system to protect primary data. Not only can teachers, students, and administrators accidentally delete important files, but hurricanes are a constant threat every summer and fall. In 2003, Hurricane Isabel did some of its worst damage in Dare County, where storm surge flooding and winds damaged thousands of homes and brought down hundreds of trees.

Dare County Schools escaped without damage, but the realization that a lot of important files could have been lost along with the buildings themselves motivated Woody to look for a more reliable backup system that would also centralize the backed-up data in one location rather than having it reside alongside the primary data at each of the 11 schools. The Dare County’s original backup system also depended entirely on individuals at the different schools to make sure the backups were done.

“Originally, to do daily incremental backups, someone at the schools had to swap the tapes. The old storage system just ejected the tape and waited for a new one. If no one put in a new one, the backup didn’t happen. So I had to rely on the people at each school to swap out those tapes,” says Woody. “Also, if we needed to restore several files or a directory, it could take a couple of hours to go through five or six different tapes, reassembling the changes from all of the disks. . . . It was real time-consuming.”

The data on the school servers consists primarily of teachers’ lesson plans and related materials, teacher evaluations, financial information used by the administration, and other school-related information. The lesson plans in particular represent a great deal of work that would be difficult for the teachers to re-create if the lesson plans were lost.

Backup, Archiving & More

In 2004, one year after Isabel, Woody selected the STORServer K12 Appliance, one of the STORServer line of Business Continuity Appliances

(www.storserver.com). The appliances use Tivoli Systems Management software and have backup, disaster recovery, archiving, data protection, and lifecycle management features in one hardware unit. Because the STORServer supports dozens of operating systems, it works easily with the school district’s 2,200 Windows 2003, 2008, Netware, and Linux workstations and servers.

Woody says the process for both backing up and restoring is quick and fairly easy. The initial implementation did take more time—several days—because Dare

County had to do an initial backup of all of the district’s servers in order to have a full copy of all of the files and directories for future incremental backups. To accomplish that initial backup, the IT staff installed a client on each school server. The agent communicates with the STORServer over the district’s network.

Saved Work

Students and teachers save their work to the server to ensure it is backed up. If they save it locally to the PC’s hard drive, it will not be backed up and will also be erased over the summer when the PC is reimaged, says Woody.

“We encourage them to save it to their ‘home drive,’ but if they don’t, and if we reimage the PC, then the file is gone,” he says.

The importance of saving files to those central servers (and backing them up) was illustrated not long after the

district installed STORServer. A teacher at one of the schools accidentally erased several gigabytes of storage snapshots containing student work. Getting those files back took only about 10 minutes, says Woody.

“It was a matter of one or two clicks, and the files were restored. We’ve had people delete stuff several times since then. We had a big restore for one school that involved the teachers’ drives,” says Woody, adding that because restoring files is simple enough for non-technical users to do, he is called in to help only when a major restore is involved.

In 2008, the district upgraded its STORServer and increased capacity to 15TB, primarily to accommodate more graphics files that both teachers and students are storing, such as video blogs and photography. Even though the school reimages the PCs every summer and deletes all of the prior year’s student files, the storage needs are continuing to grow.

Woody says the centralized storage has helped save money and space that would have been needed to purchase and maintain about 20 weekly tapes and a dozen monthly backup tapes for each of the 30 school servers. None of the schools have to deal with tapes or managing backups anymore.

It’s also made disaster recovery planning much simpler, because Woody no longer has to worry about trying to save multiple tapes in each school. Instead, “When a storm comes, I simply take the disaster recovery tapes out [of the STORServer,]” says Woody. ■



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Woody configured the software to automatically do future backups at specific times. After that, STORServer automatically handles the backup without depending on a human to insert a fresh tape. Changes to the schedule or type of backup done, or the addition of new servers, can be made through the STORServer Manager operations interface, a Microsoft Windows client.

Woody says restoring lost files requires using a Web interface to browse to the backed-up files and select the file name and date required. A robotic arm inside the unit handles the actual selection and moving of the tapes.

“It’s a very easy Web interface,” says Woody. “You put your URL in, log in, [and] then select Restore, which takes you to the directory structure of the files and a list of all active files. You then pick which version of the file to restore.”

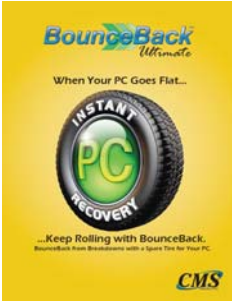
The Dare County Schools system started as a STORServer with a 24-tape

STORServer K12 Appliance

An integrated appliance that provides a suite of software for backup, archiving, and disaster recovery. The appliance supports more than a dozen OS platforms, many email and database platforms, various network connections (NAS, SAN, LAN, WAN), and hundreds of storage devices. The appliance is available in three sizes and supports customer environments of up to 270TB.

“It’s a very easy Web interface. . . . You put your URL in, log in, [and] then select Restore, which takes you to the directory structure of the files and a list of all active files. You then pick which version of the file to restore,” says Carl Woody, technology director for Dare County Schools.

(800) 550-5121 | www.storserver.com



Simple & Quick Backup & Recovery

CMS Products BounceBack Ultimate

by Seth Colaner
• • •

EVERY DATA CENTER employee knows the necessity of backup and recovery solutions. CMS Products’ BounceBack Ultimate is designed to be a “digital spare tire” for PCs, allowing users to back up and restore the entire contents of a PC, including applications, data, personal settings, operating system, partitioning, and formatting.

Features include Instant PC Recovery, which lets users start up a PC from an external USB hard drive in case the operating system or hardware malfunctions, and instant One-Button Recovery, which is a simple and direct way of restoring a PC hard drive without the need for reinstalling anything. The QuickRestore function also lets users quickly restore specific files and folders.

Other features include CDP (Continuous Data Protection), a function of BounceBack Ultimate that continuously keeps new or modified files up-to-date; the ability to let BounceBack Ultimate run its processes in the background so users can continue to work while the program takes care of business; and easy-to-configure AES 256-bit en-cryption to secure your data from prying eyes.

BounceBack Ultimate also lets users back up to multiple media, such as an external hard drive or network drive, simultaneously so users can have multiple concurrent backups. With synchronization capabilities enabled, users can save a backup of their projects on a backup drive and use the drive on other computers. When the drive is again connected to the original computer, BounceBack Ultimate automatically syncs the changes, ensuring you’re always working with the most up-to-date files. Users can also schedule backups and create backup sets.



CMS Products BounceBack Ultimate

Full download: \$89
Full CD: \$99
Upgrade download: \$69
Upgrade CD: \$79

Lets users back up and restore the entire contents of a PC.

(800) 327-5773

www.cmsproducts.com

FEATURED PRODUCT

Smart Data Archiving

Iron Mountain's Virtual File Store Service Keeps Data Safe & Accessible

by Robyn Weisman

• • •

IRON MOUNTAIN HAS SPECIALIZED in storing and protecting information for organizations since it first opened for business in 1951. However, back in the early days, the files Iron Mountain handled were paper ones, says Steve Blumenau, vice president of technology and digital archiving at Iron Mountain Digital. “Iron Mountain’s white trucks would drive around and collect boxes of paper, and then [the company] would store them and provide management services just as we do today,” he says. “If you think about it, the transmission media were trucks rather than the Internet.”

And Iron Mountain (www.ironmountain.com) has evolved as data has evolved. The company now offers a cloud-based archiving service called Virtual File Store that securely stores as much or as little

Virtual File Store gets the same treatment as all of Iron Mountain’s other archiving services. In addition to its security, Virtual File Store digitally signs every digital file of yours that it stores so that you can prove the authenticity of your information and tracks your data’s movement so that you have a chain of custody to which you can refer.

Enterprise-Class Infrastructure & Security

Virtual File Store is in essence an offsite archiving service that focuses on storing file-based data. When you sign up for Virtual File Store, Iron Mountain sends you an appliance that provides you a virtualized view of your data. “It looks like a 1U file server, but it doesn’t offer local storage except some caching for optimization purposes, yet it represents all of your

from your current virtual setup, a 5-year-old tape drive, or even a random file on a 5.25-inch floppy disk running a program that hasn’t been used in 20 years (although these requests are rare). “We have all the facilities to get this information off of the different mediums and then get the data loaded,” says Blumenau.

You also can move data at LAN speeds rather than Internet speeds into Virtual File Store’s optional Data Shuttle appliance. Once you are finished archiving this data, you disconnect the appliance and physically ship it to Iron Mountain, and Iron Mountain’s experts import this data into your repository. And if you need to bring large amounts of data back into your network, Iron Mountain will place these files onto the Data Shuttle appliance and ship it back to you for fast access.

Avoiding Obsolescence

Virtual File Store offers excellent automation capabilities. It integrates directly with Microsoft Active Directory so that you do not need to

set up new names or permissions when using it. In addition, it includes some built-in automation capabilities, and Iron Mountain has partnered with several companies to provide more granular capabilities that match up with your specific requirements.

Finally, Virtual File Store saves you money because you are able to move more of your inactive data offsite, thereby freeing server space. “Companies don’t have to buy more storage, often for a long time, depending on how much data you can take out of your environment,” says Blumenau. “And it helps with the issue of obsolescence because eventually all hardware becomes out of date.” ■

IRON MOUNTAIN DIGITAL VIRTUAL FILE STORE SERVICE

(800) 935-6966
www.ironmountain.com

- Description:** A hosted and managed digital archiving service that offers such enterprise-class features as automated backups, 24/7 access to data, and the ability to archive data at LAN speeds (with the addition of Virtual File Store Data Shuttle Service), without having to incur large up-front costs.
- Interesting Fact:** For almost 60 years, Iron Mountain has managed the archiving and protection of information of about 140,000 organizations, from SMEs to the U.S government. It holds the master recordings of Elvis Presley’s “Hound Dog” and Frank Sinatra’s “Night and Day,” Bill Gates’ Corbis Photographic Collection, and the remains of United Airlines Flight 93.

Office 2010 Release Set For June

Microsoft confirmed it will release Microsoft Office 2010 in June. Along with the release of Office 2010, the company will also be releasing Office Web Apps for free, which is seen as a response to the increasing presence of open-source and Web-based office productivity applications from companies such as Google and IBM. Office Web Apps includes Word, Excel, PowerPoint, and OneNote and can be stored on Windows Live. The next generation of Microsoft Office is already available to the public in beta form on Microsoft’s Web site, where users can also try out Office Web Apps after installing Office 2010.



IBM Acquires Guardium

IBM announced it has acquired Waltham, Mass.,-based Guardium, a database security company that provides software that monitors database activity and safeguards data. IBM says it plans to incorporate Guardium’s products into its Information Management Software portfolio and sell them through its Business Analytics and Optimization Consulting division, which is staffed by about 4,000 consultants. IBM did not disclose the cost of the acquisition.

Senators Ask For Speed In EU's Investigation Of Sun/Oracle Deal

Citing Sun Microsystems’ “deteriorating financial condition,” 59 U.S. senators have requested that the European Commission expedite its probe of the pending acquisition of Sun by software giant Oracle. The senators, led by Sen. John Kerry (D-Mass.), sent a letter to the commission in which they claim that Sun’s financial situation “has become more precarious” and that the company may be forced to make further job cuts in addition to the 3,000 announced in October. The deal has already been approved in the United States, but the EU chose to further investigate whether the acquisition will threaten competition. The commission has until Jan. 27 to make its final decision.



Microsoft CFO To Leave

Chris Liddell, Microsoft’s CFO since 2005, will depart the company by the end of the year. His replacement, Peter Klein, will leave the same position in Microsoft’s Business Division. Liddell’s departure came as somewhat of a surprise to many industry insiders, although it is thought by some he may be seeking a position as CEO elsewhere. Klein has worked in corporate finance for various companies for 13 years. Microsoft CEO Steve Ballmer praised Liddell’s abilities to reduce costs and produce dividends for stockholders.



IRON MOUNTAIN

data as you need with minimal up-front costs. “Virtual File Store expands as you need it,” says Blumenau. “It means not only that you don’t have to pre-purchase storage [but that] you can very quickly bring it onboard and take advantage of it.”

The Archiving Experts

Iron Mountain has kept on the cutting edge of data protection services by tracking the needs of its customers and the market in general. “From this background, we’ve become the expert in archiving, in

data, whether it’s a few gigabytes or many petabytes,” says Blumenau.

According to Blumenau, the pricing structure of the appliance and the actual storage are separate. “You pay as you go with the storage, and then you pay a rental fee for the appliance itself, which basically covers our 24/7 support,” says Blumenau. “[Virtual File Store] is a fully managed service that we monitor all the way to the edge, [including] the software, hardware, and the service itself.”

And this service includes the same level of security to SMEs as it does for large enterprises and government agencies. “Our data centers are like underground cities. They are hundreds of feet underground with their own reservoir, armed guards, and physical and logistical security like you would never believe,” Blumenau says. “The service provides dual connections to the power and communications grids of both of our major U.S. data centers,” says Blumenau. “It will actually read or write to either data center, and if it writes at one, [the data is] mirrored to other data center.”

Blumenau stresses these features because he believes Iron Mountain offers the sort of service that, until fairly recently, wasn’t available to SMEs. “You’re talking about leveraging [relatively few] dollars to gain access to the highest level of enterprise-class infrastructure,” he says.

Easy Access For All Types Of Data

Virtual File Store has an intuitive interface based on standard CIFS/NFS protocols. “If you mapped a share from our appliance to, say, your laptop, you would see files and folders as you would expect to see from a file server. If you click on a file, it will open [just like a regular file],” Blumenau says.

Moreover, Virtual File Store can archive any type of data you have, whether it’s

Virtual File Store Benefits

- Reduces the costs associated with storing and protecting your inactive data
- Offers scalability as your storage demands change
- Protects data in the event of a disaster while ensuring availability
- Archives data at LAN speeds

compliance, and in dealing with the [different regulations and statutes] that different states and countries have,” Blumenau says. “Our customers look to us to help them to protect their data and help them find their way through these issues.”

Blumenau points out that Iron Mountain may well be the most audited company in the world, especially given the number of companies it services overall. “If your company goes through a security audit, we have to go through it, too, because we’re an extension of [the company],” he says. “Our physical and logical security not only go through audits [conducted] by outside companies but our own, as well.”

SIX QUICK TIPS

Troubleshoot Email Servers

Use Training & Common Sense To Alleviate Problems

by Drew Robb

• • •

EMAIL SITS HIGH on the love-hate list—it is something you can’t do without, but wish you didn’t have to bother with. In addition to bringing important data into and out of the company, it transports malware, adware, spam, and other assorted ills right to the desktop. And with such a huge volume of traffic to deal with, email servers tend to become trouble spots within IT.

“Most problems arise from poor setup and design of the actual email server itself,” says Paul Banco, CEO of MXsense (www.mxsense.com). “Since email is the primary means of communication, people don’t tend to stop and think twice about what they are sending and attaching.”

viruses and worms from spreading around an organization, for example, is to implement simple end-user policies, make them known, and provide some training in their application.

“Email is the No. 1 conduit to spreading viruses,” Banco says. “It is important to set excellent policy as well as common-sense training of end users. Without this, a single email could bring down an entire organization.”

Good policy can go a long way when it comes to preventing viruses via attachments. This doesn’t have to be rocket science: If you don’t recognize the sender and/or the attachment, don’t open it. If the attachment isn’t needed, don’t open it. Also, having up-to-date virus software can block many potentially nasty files from gaining a foothold. And educate users on why they can’t access the network from their laptops until they download the latest virus signatures—otherwise, they may find a way to bypass this rule and thus put the whole organization in jeopardy.

Offload Email Traffic Into Archives

Nothing, it seems, fills up faster than an email database. Each user quickly consumes many gigabytes of space. Soon enough, disk space is at a premium, and the performance of the email server can slow. Offloading traffic into an archive, then, can go a long way toward resolving email server problems. It reduces the burden on the server so it can focus on current and recent messages only, and at the same time gives users rapid access to older traffic.

“A good email archiving solution which unloads the messages from the local email server is a great tool,” Banco says. “It allows end users to quickly tap into their archive by utilizing a simple search query.”

In addition, email archiving solutions often come with legal, disaster recovery, and backup applications to add another layer of risk mitigation.

“There are many software products as well as services available to implement mail archives that fulfill different legal and security requirements,” Waterkamp says.

Manage Mailbox Size

In larger organizations, a hefty amount of emails are sent every day. In addition to archiving, it is sometimes wise to implement mailbox quotas. This helps administrators and end users manage mailbox size and can often prevent useless emails and massive but unneeded attachments from hogging valuable space.

“It isn’t difficult to configure maximum mailbox sizes so that users can manage them on an ongoing basis,” Waterkamp says. “Mailbox size management is best combined with an archiving solution.”

Isolate The Email Server From The ‘Net

An mx record is an entry in a DNS database that points to the mail server for that domain. Waterkamp suggests the use of what is known as a mailhop service in order to isolate email servers from the Internet. This is a great way to prevent malicious attacks.

“When you implement a mailhop service, the public mx record is directed to the mailhop provider, and your SMTP server is configured to accept only inbound connections from your provider,” Waterkamp says. “This creates an isolation layer for your SMTP email server, making it less vulnerable to abuse and attacks.” ■

Easiest Tip:

Pump Down The Volume

High volumes of email hitting the server can lead to scalability challenges and an expensive investment in a server upgrade or the addition of more network bandwidth. Although a huge email volume can affect server performance, it is a problem that can be easily fixed. Adding a gateway or a hosted layer of email security, for instance, can improve the performance and scalability of email servers without adding significantly to cost.

“Consider adding a gateway or hosted layer of email security in front of your email servers,” says Angelos Kottas, principal product manager at Symantec (www.symantec.com). “This gateway layer can remove 90% or more of email volumes that are comprised of spam and also provide a first layer of defense against malware.”

Smartest Tip:

Use Multilayered Security

Multilayered security can be useful in resolving email server security problems. Although no solution will block 100% of malware from getting through, having a few different layers of security in place can stop the bulk of it. New technology has arrived on the market to facilitate the strength in depth approach.

“New secure Web gateway technologies allow organizations to add an extra layer of defense against email and Web-based threats that get through and infect endpoint devices,” says Kottas. “In addition to proactive defense, next-generation Web security solutions can leverage bidirectional scanning and behavioral modeling to identify internal infections and help drive remediation.”

NIST Re-evaluates Government Cybersecurity Processes

A new set of NIST (National Institute of Standards and Technology) guidelines has been laid out to help government IT centers create an environment in which cybersecurity is considered in the development and planning stages, rather than adding it on later in the process. Additionally, the guidelines set forth in its 800-37 draft focus more on continuous monitoring. According to Ronald Ross, leader of the FISMA Implementation Project for NIST, “The new guidelines represent an ongoing risk management process that reflects the kinds of changes that happen on a daily basis.” Ross goes on to say that “people have to operate in a changing environment, where the threats change daily and you have a lot of churn going on within the infrastructure.”

Steps For Cybersecurity Success

In particular, the 800-37 draft covers a six-step Risk Management Framework in the system development lifecycle. First, government IT staff should categorize the information based on a worst-case impact analysis, such as FIPS 199. Second, government IT managers will select a set of baseline security controls tailored to the organization. Third, admins will implement the security controls, and fourth, an independent security team will assess whether or not your policies are functioning correctly and producing the desired outcome. Step five will authorize information system operations, such as individual and remote access, to the appropriate level for given assets, individuals, and specific organizations based on where risk is acceptable. In the sixth and final step, a system should be set up to monitor the security policies and information system on an ongoing basis and report the security state to designated organization officials.



Of particular note to government IT staff, Ross says that “very early in the setup of tasks, you’ll need to develop a continuous monitoring strategy, and that will be the organization’s view of which controls they will monitor, how frequently they will monitor those controls, and what types of activities will deliver the biggest payout at the end of the day.” This way, any type of change will cause admins to take another look at their security policies. When setting policies, Ross suggests that IT staff examine FIPS 199, FIPS 200, and NIST 800-53. He explains, “FIPS 199 is one of the most important for examining the criticality of data; FIPS 200 articulates the 17 fundamental information security requirements; and the new NIST 800-53 provides the security control catalog, which defines the security controls in the 17 families in FIPS 200.” And currently, NIST is reworking the 800-37 guidelines, which are the processes an organization must go through to execute the steps in the Risk Management Framework.

by Nathan Lake

BONUS TIPS





■ **Educate users on spam.** Teach employees not to ask for it in mail opt-in programs. Use a home email address for personal use—don’t ever use your business email at nonbusiness sites, such as entering an online raffle with your business email. And set up basic spam filters at the earliest opportunity—it may be necessary to supplement such email applications as Microsoft Exchange with additional spam filtering programs.





“There are some basic spam filtering options for MS Exchange, but they are not comprehensive enough,” says Sabine Waterkamp, president of managed IT services provider ACSLA (www.acsla.com). “To prevent most spam, you would need a spam filter software or service.”

■ **Marry security and accuracy.** Inaccurate or multiple antivirus engines can lead to false positive verdicts, which block legitimate email and

slow down business processes. Purchasing antivirus software that blocks threats—both new and old—on a consistent basis is the way to go. Angelos Kottas, principal product manager at Symantec (www.symantec.com), recommends that organizations be careful of over-aggressive approaches that sacrifice accuracy in favor of a higher catch rate. The ongoing cost of false positives can quickly surpass any modest increase in catching malware.

Antispam Appliances

Product	Axway MailGate	Barracuda Spam & Virus Firewall	Cisco Spam & Virus Blocker	Cisco IronPort Email Security C-Series
				
Description	<p>This mail transfer agent protects the network from spam using rules-based heuristics; IP reputation; detection of anomalies, outbreaks, and zombies in real time; backscatter protection; rate throttling; and quarantining on the part of both administrators and end users.</p> <ul style="list-style-type: none">• McAfee or Kaspersky antivirus with zero-hour threat protection• Support for clustering and centralized reporting• Enterprise-level policy control and notification• Can convert inbound or outbound Office attachments into password-protected PDF files <p>Best For: Enterprises of all sizes.</p> <p>Price: Starts at \$8,000</p>	<p>Eschewing licensing and per-seat fees, Barracuda seeks to provide low-cost email filtering for organizations of any size. Its Spam & Virus Firewall appliance can scan attachments, even encrypted ones, and detect whether a spam outbreak is coming from within the network.</p> <ul style="list-style-type: none">• No per-user or licensing fees• Hourly updates• Outbound spam and virus filtering• Available in eight models to fit your organization's headcount <p>Best For: Enterprises of all sizes.</p> <p>Price: Starts at \$699</p>	<p>Cisco's Spam & Virus Blocker appliance is backed by what the company calls the world's biggest vulnerability database and threat monitoring network, Cisco SenderBase, as well as the company's Security Intelligence Operations ecosystem and a broad service plan.</p> <ul style="list-style-type: none">• 99% success rate• Fewer than one in a million false positives• 30-day money back guarantee <p>Best For: SMEs with fewer than 250 employees.</p> <p>Price: Starts at \$1,829 (one year for up to 50 users)</p>	<p>Used in 80% of the biggest ISPs and more than 40% of the biggest companies worldwide, the C-Series of IronPort devices from Cisco goes beyond anti-spam protection to supply antiphishing, anti-malware, and more. Besides its security duties, the C-Series also provides a mail system overview.</p> <ul style="list-style-type: none">• Speedy, reliable, and accurate• Reduces the downtime associated with malware infections• Simple to deploy <p>Best For: Enterprises of all sizes.</p>
Contact	(480) 627-1800 www.axway.com	(888) 268-4772 www.barracudanetworks.com	(800) 553-6387 www.cisco.com	(800) 553-6387 www.ironport.com

Product	PineApp MASA	Proofpoint Messaging Security Gateway P340	Proofpoint Messaging Security Gateway P650	Red Condor Message Assurance Gateway Network Appliance
				
Description	<p>The PineApp MASA antispam/antivirus appliance is a hybrid of the company's Mail-SeCure and Archive-SeCure offerings. With a four-tier system for setting email policies and permissions, MASA covers a broad spectrum of message processing requirements. It offers protection against data leakage and reduces capacity consumption through single-instance storage techniques and data compression.</p> <ul style="list-style-type: none">• Antispam, anti-malware, and archiving in one server• Supports various types of mail servers• Optional encryption <p>Best For: Medium-sized organizations.</p> <p>Price: Starts at \$4,000</p>	<p>Based on a quad-core Intel Xeon processor, this hardened antispam appliance offers advanced message tracing, data loss protection, and TLS message encryption. Its antivirus component protects against new, zero-hour threats as well as those identified by continually updated signature profiles.</p> <ul style="list-style-type: none">• 250GB of mirrored capacity• Assists with HIPAA, GLBA, and PCI DSS compliance• Outbound filtering• 60,000 messages per hour peak performance <p>Best For: Small to medium-sized enterprises.</p> <p>Price: \$3,995 plus annual subscription fees</p>	<p>The Messaging Security Gateway P650 differs from Proofpoint's P340 with more capacity and RAM (6GB to the P340's 4GB), among other things. It features the company's Proofpoint MLX spam detection engine, the Proofpoint Enterprise Protection Suite, and the Proofpoint Enterprise Privacy Suite with automatic encryption.</p> <ul style="list-style-type: none">• Inbound and/or outbound message firewall• 300GB in RAID 1• 160,000 messages per hour (peak) <p>Best For: Medium-sized to large enterprises.</p> <p>Price: \$8,500 plus annual subscription fees</p>	<p>This lineup of fully managed appliances offers hands-free spam and malware protection. One key feature, available as an upgrade, is Red Condor's Fault-Tolerant Vx Technology, which allows automatic failover to Red Condor's hosted service for four full days in case the local MAG (Message Assurance Gateway) device goes down.</p> <ul style="list-style-type: none">• BotHunter, Zero Minute Defense Network, and Adaptive Threat Detection Perimeter Defense• Models available for 500 to 20,000 inboxes• False positive rate lower than one in 190,000• Inbound and outbound protection <p>Best For: ISPs and telecommunications companies, SMEs, and the government and education markets.</p> <p>Price: Starts at \$1,499 plus service packs</p>
Contact	(877) 300-3422 www.pineapp.com	(408) 517-4710 www.proofpoint.com	(408) 517-4710 www.proofpoint.com	(888) 966-7726 www.redcondor.com

PRODUCT SPOTLIGHT

SECURITY

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Compiled by Marty Sems

Fortinet
FortiMail-2000B



With the ability to be deployed in a gateway, server, or transparent configuration, the carrier-class FortiMail-2000B provides flexibility and regulatory compliance aid in high-traffic message filtering environments.

- Support for up to 50,000 users
- Can handle 1 million messages per hour
- 2TB capacity, scalable to 6TB

Best For: Carriers, managed security service providers, and large enterprises.

Price: Starts at \$25,995

MailCleaner
Appliance 200



The MailCleaner Appliance 200 is the appliance version of MailCleaner's Enterprise antispam software. Thanks to its 3GHz Intel Core 2 Duo processor and 2GB of RAM, the 250GB system features robust performance for enterprises with up to 200 or 250 users.

- Browser-based administration
- Updates every 15 minutes
- Optional hardware and support upgrades, including RAID and RAM

Best For: Small to midsized enterprises.

Price: Starts at \$2,299

MailFoundry Email
Filtering Appliance



Using all closed-source technology, MailFoundry says that its antispam/antivirus appliances require very little training or other interaction from IT staff or end users. The company updates its fingerprint-style spam profiles every five minutes and claims an extremely low level of false positives.

- MessageIQ email security engine
- Five-minute updates
- 1U form factor
- Models available for up to 30,000 users

Best For: Small to midsized enterprise market, including service providers.

Price: Starts at \$1,299

PineApp Mail-SeCure



PineApp takes the source credibility angle on antivirus and antispam perimeter security with its Mail-SeCure appliance. By shutting out disreputable messages, the device reduces the load of other email content it needs to analyze.

- Checkmark Premium Certified for a 99%+ detection rate
- Blocks bounced messages with forged From lines (backscatter)
- Features load balancing and data leakage protection
- Optional encryption and content control features

Best For: Enterprises with up to 10,000 users.

Price: Starts at \$1,600

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www.fortinet.com

(514) 655-4450
www.mailcleaner.com

(888) 302-6245
www.mailfoundry.com

(877) 300-3422
www.pineapp.com

Roaring Penguin
CanIt-PRO



This email gateway server employs a host of techniques to separate the wheat from the chaff: black/white/gray lists, SPF, SpamAssassin, MIMEDefang, content and format analysis, DNS verification, Bayesian stats, open proxy lists, and more. The appliance comes in a rackmount form factor.

- Supports Lotus Notes, Exchange, Postfix, and endmail
- Plug-and-play setup
- Automatic updates for spam software
- Antivirus capabilities
- Inbound and outbound protection

Best For: Small to midsized enterprises.

Price: \$10 per user

Roaring Penguin
CanIt-Domain-PRO



The CanIt-Domain-PRO's internal and outgoing email filter allows the administrator to break up mail system responsibilities into realms with separate users, rules, and streams. CanIt-Domain-PRO publishes its MIBs (management information bases) for oversight by monitoring tools such as Kaseya, N-able, and Level Platforms.

- Can be branded by MSPs
- Facilitates delegation of duties among system admins

Best For: Managed service providers, Web hosts, and ISPs.

Price: \$12.50 per user

Symantec
Brightmail Gateway



Available in physical appliance form or as a VMware-compatible virtual appliance, this gateway protects the enterprise from spam (with greater than 99% efficacy) and even zero-day malware. Reporting features and a dashboard keep system administrators on top of every IM and email security situation. This model's per-seat fee is subject to discounts based on volume and contract length.

- Fewer than one in a million false positives
- More than 40 back-to-back Virus Bulletin VB100 antivirus effectiveness awards
- Data loss prevention
- Global and local IP reputation checking

Best For: Medium-sized to large enterprises.

Price: \$1,995 plus per-user licensing fees

Symantec Brightmail
Gateway Small
Business Edition



The scaled-down Brightmail Gateway Small Business Edition can be much more economical for smaller enterprises and agencies. It monitors inbound and outbound messages, both IM and email, using the latest automatically downloaded updates available.

- Thorough protection at a competitive price
- Comes as a physical or virtual appliance
- Thwarts zero-day threats
- Better than 99% effectiveness at blocking junk messages

Best For: Organizations with 250 users or fewer.

Price: Starts at \$2,490 (up to 100 users)

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Study Shows Web Apps Account For 78% Of Software Vulnerabilities

Software vulnerabilities reported during the first half of this year jumped 10%, to 3,100, from the same period in 2008, SaaS-provider Cenizic states in its recent “Web Application Security Trends Report.” Of the total, 78% included Web-related vulnerabilities, with 90% of those pertaining to code in commercial Web applications, 8% included Web browsers, and 2% involved Web servers. Of note to SMEs is that Sun Java, PHP, and Apache “continue to be among the top 10 vendors having the most severe vulnerabilities for the first half of 2009,” according to the study.



Cenizic states that SQL injection and XSS (Cross Site Scripting) vulnerabilities accounted for 25% and 17%, respectively, of the various vulnerabilities classes it tracked.

Authorization and Authentication vulnerabilities, meanwhile, represented about 14% of all Web vulnerabilities, while Directory Traversal totaled 12%. Among Web browsers, Firefox totaled 44% of browser vulnerabilities, followed by Safari (35%), Internet Explorer (15%), and Opera (6%). Cenizic based the report on analysis drawn from published vulnerabilities reported with various sources and Cenizic’s third-party databases related to Web app-security issues.

Complex Security

Cenizic CTO Lars Ewe attributes the large number of vulnerabilities affecting Web apps to the complexity involved in securing them vs. how relatively easy it is to secure networks. Ewe says because Web app technologies are well distributed but very different in nature, there’s a much broader spectrum of technologies to deal with, so expertise is a problem. Although the field of IT candidates with network security expertise is good, Ewe says, those with Web app security knowledge is limited.

Additional training is usually needed after hiring a Web app security employee, he says. With company budgets and timelines to consider, some companies must choose functionality over security. Additionally, he says, fixing Web app vulnerabilities can take weeks, and often months, of man-hours.

“I wish I could say [the increase in Web app vulnerabilities reported] caught us by surprise, but unfortunately, it didn’t,” Ewe says. “As for now, we’re clearly behind the eight ball.”

As for Web browsers, there aren’t huge differences among browsers security-wise, he says, as they all provide similar levels of security. Beyond applying up-to-date fixes and manually installing security-related plug-ins, Ewe advises companies to educate employees about the potential ramifications of their browsing practices.

“While sometimes we tend to paint a very grim picture, I’d like to point out there are good things happening, too,” Ewe says. “It’s still not a pretty picture right now, but the clouds are starting to go away and some sunlight is starting to come through.”

by Blaine Flamig

Social Networking Security

Protect Company Assets While Reaping Social Networking Rewards

by Brian Hodge

. . .

IN MANY ENTERPRISES, employee use of Facebook, MySpace, and other social networking sites is the subject of a vigorous, ongoing debate.

IT managers typically regard such sites as a source of headaches and as portals for identity theft via phishing, site spoofing, and the distribution of malware and spam. The openness these sites need to attract and keep users is the very thing that allows vandals and criminals to exploit them.

“The security mechanisms for any of the different social networking media vary from poor to nonexistent,” says Boris Bless, network support technician with the Jefferson Center For Mental Health.

On the other hand, social networking sites have a legitimate and growing place as a marketing and promotional tool and can be a means of keeping in touch with customers, clients, and associates.

“Many people depend on social networking sites for news, keeping in contact with their families, outside interests, even work-related research and connections.”

- Vector CSP’s David Wilson

The need, then, is to develop a security approach that leaves room for the rewards without inviting undue risk.

Understand The Dangers

In addition to software-based security breaches, social networking sites can also draw out problems originating from within, such as employees whose online behavior reflects poorly on their employers or disgruntled workers (or imposters who’ve hijacked a person’s account) conducting a smear campaign against the company.

The most prevalent danger, however, may simply be loose lips—or, rather, fingers—and otherwise well-meaning people’s tendencies to perceive their social networking activities as being as private as a phone call.

“People can be using a social network to say all kinds of things that shouldn’t be said [and can] impart any number of types of data that shouldn’t be leaving the premises,” says Bless.

This can include anything from personal data and privileged client information to proprietary business secrets.

Key Points

- A reliable firewall and up-to-date antivirus and anti-malware suites should be all the protection necessary to address social networking dangers.
- With sufficient physical security measures in place, the most significant risks actually involve employee activity from within.
- The cheapest form of social networking security is making sure employees know the policies they’re expected to follow and the consequences for breaking the rules.

“If somebody is chatting with someone, even a professional colleague or a peer, God only knows who or what else is participating in that chat,” Bless adds.

Then again, it can be counterproductive to overstate social networking site dangers

danger of a lot of other equally dangerous and possibly more likely threats.”

Both Wilson and Bless stress the importance of employee education, so workers can take responsibility for their own online safety. This can include sending out regular bulletins on known scams and encouraging employees to report any odd messages, pop-ups, or communications they may encounter.

Equally important is making sure employees understand what can happen if they’re caught disseminating sensitive information.

“I have personally found that one of the best things you can do is scare [employees] by telling them what the possible consequences are, depending on what kind of information or data you’re trying to secure,” says Bless.

If the enterprise is subject to government regulation and fines, that can provide even greater leverage.

Bless elaborates: “When I tell people, ‘If we can identify that you were the person who violated a particular written policy, the fines start at five figures and they go directly to you, not the company,’ [they] get really freaked out by that and go, ‘I’ll never do it again!’ It’s a horrible thing to tell somebody, but they really do toe the line after that.”

Ultimately, social networking security comes down to simple IT department vigilance.

“A network’s security isn’t based on what types of sites their users visit,” Wilson says. “It’s based on the awareness of security managers and network managers. They need to know what is dangerous, what is not dangerous, and what their people are doing.”

Avoid The Nuclear Option

Some companies may be tempted to prevent potential headaches by instituting an across-the-board ban on social networking. Wilson discourages this, as it’s rooted in fear and a lack of understanding of how to keep social networking sites working for the greater good of all concerned.

“A cultural shift is necessary,” he says. “Many people depend on social networking sites for news, keeping in contact with their families, outside interests, even work-related research and connections. Just shutting it all down without thought sends a very negative message to employees, and can lead to serious morale issues.”

The key to social networking site security, then, is a coherent, comprehensive company policy that takes into account not only data security, but also the needs and personalities of workers.

Top Tips For Image Control

- Security involves more than just preventing viruses and malware. In broader terms, it also encompasses company image. David Wilson, director of IT services at Vector CSP (www.vectorcsp.com), offers a few tips for keeping negative impressions to a minimum on social networking sites.
- Awareness is key. Be familiar with all the sites that are out there.
- Monitor these sites for mentions of your company name or brand.
- Make sure employees understand the ways in which what they post could hurt the company and their jobs.



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Product	Appro GreenBlade System	Dell PowerEdge M710	Dell PowerEdge M610
Description			
	<p>The Appro GreenBlade System is a modular, affordable, energy-efficient building block solution that consolidates server, storage, network, power, and simplified management capabilities in one package. GreenBlade is ideal for customers looking to scale down costs while increasing performance, reliability, and serviceability at a competitive price for the best ROI.</p> <ul style="list-style-type: none">• Features hot-swappable and redundant cooling fans, power supplies, and blade nodes• Holds up to 10 blade servers, offering a total of 20 CPUs/120 processing cores in a 5U form factor• A variety of configuration options: up to 64GB of memory and 1TB of storage per blade• Up to four 1,625W high-efficiency power supplies per subrack• Cluster management options include a choice of open-source software solutions <p>Best For: Data centers that need a substantial amount of storage support.</p>	<p>Delivering high performance with every watt, the full-height Dell PowerEdge M710 server uses highly efficient power supplies, optimized fans, and a unique airflow designed to provide advanced power management technology. It features a sizable memory capacity and multiple I/O options. Additionally, the M-series blades offer centralized manageability, enhanced scaling, and space-saving architecture.</p> <ul style="list-style-type: none">• 18 DIMM slots with support for up to 144GB of RAM• Intel VT FlexMigration utilizes Intel Xeon processor-based servers for increased flexibility• The Dell Management Console from Symantec provides a modular foundation for automated security management• Lifecycle Controller offers provisioning functions via the Unified Server Configurator• External Storage options include Dell/EqualLogic PS5000 Series, PowerVault NX1950 Unified Storage Solution, and PowerVault MD3000i <p>Best For: Data centers that need maximum RAM capacity and overall flexibility.</p> <p>Price: Starts at \$4,718</p>	<p>Featuring the Intel Xeon processor 5500 series, the half-height Dell PowerEdge M610 blade server is optimized for improved virtualization performance, more memory, and less power consumption.</p> <ul style="list-style-type: none">• Turbo Boost Technology complements the Intel Xeon Processor 5500 to support software multi-tasking• The Dell Unified Server Configurator is both secure and well-designed for operating system deployment• Up to two PCI-E x8 Mezzanine Card slots for each M610 blade• Two embedded Broadcom NetXtreme II 5709 Gigabit Ethernet NICs• Fits into M1000e blade enclosure with eight full-height or 16 half-height blades <p>Best For: Data centers requiring increased energy efficiency and enhanced virtualization capabilities.</p> <p>Price: Starts at \$4,286</p>
Contact	(800) 927-5464 www.appro.com	(877) 671-3355 www.dell.com	(877) 671-3355 www.dell.com

Product	IBM BladeCenter HS22	IBM BladeCenter LS22	NEC Express5800 SIGMABLADE/B120a-d
Description	<div></div> <p>IBM BladeCenter HS22 is an easy-to-use two-socket blade optimized for performance, power, and cooling. It provides high-speed I/O and support for a large memory capacity. Featuring the latest Intel Xeon 5500 processors, the HS22 offers outstanding performance, flexible configuration options, and simple management in an efficient server designed to run a range of workloads.</p> <ul style="list-style-type: none">• More performance, more energy efficiency, and lower cost to run the most demanding applications• Exceptional power management with integrated tools such as the IBM Systems Director Active Energy Manager and Blue Path Cooling blade design• Increased uptime with integrated light path diagnostics and Predictive Failure Analysis, which detect component problems before failures occur <p>Best For: Data centers with the goal of managing growth and maintaining platform stability.</p> <p>Price: Starts at \$2,145</p>	<div></div> <p>IBM BladeCenter LS22 is designed to regulate power consumption with its highly efficient processors, low-power memory, and solid-state drives. The IBM Systems Director and IBM Systems Director Extensions manage automated responses, improve uptime, and provide intelligent systems reliability and remote deployment efficiency. The modular configuration supports up to 84 dual-socket servers and two six-core processors.</p> <ul style="list-style-type: none">• Runs on minimal power, yet supports multiple demanding applications• Enhanced memory performance with 800MHz options and a memory booster• Lets you swap or change blades while the current blade system remains installed• Up to 64GB of memory <p>Best For: Data centers concerned about conserving power and maximizing memory capacity.</p> <p>Price: Starts at \$2,041</p>	<div></div> <p>The NEC Express5800 SIGMABLADE/B120a-d is an innovative two-socket blade server based on an energy-efficient design and the Intel Xeon 5500 Series. The B120a-d blade server is one of the only blade servers designed without internal storage, and it can boot either from a SAN for virtualization solutions or with the NEC AD106a attached storage for the lowest total cost of ownership.</p> <ul style="list-style-type: none">• High performance, with significantly faster throughput performance over previous models• Features 12 memory slots with enhanced memory performance to increase memory support for faster access• Designed for virtualization with increased memory capacity of up to 96GB, expanded I/O Gigabit and Fibre Channel bandwidth, no hard disks for a lower cost of virtualization, and integrated system management• Modular design for simpler maintenance, high quality ratings, and a standard three-year warranty <p>Best For: Full application compatibility, virtualization, and efficiency.</p>
Contact	(866) 883-8901 www.ibm.com	(866) 883-8901 www.ibm.com	(866) 632-3226 www.necam.com

PRODUCT SPOTLIGHT

SERVERS

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Compiled by Joanna Safford

HP BladeSystem Matrix



Delivered out of the box as a preintegrated platform, the BladeSystem Matrix creates pools of server, network, and storage capacity to be dynamically provisioned to run your applications on physical or virtual servers, all managed as one environment. The BladeSystem Matrix brings together physical and virtual tools, processes, and architectures to speed time to service delivery so customers can get the benefits of shared services while preserving existing data center investments.

- Built-in capacity planning for all servers and Smart Solver technology give best-fit advice for utilization of capacity
- Ensures cost-effective disaster recovery by recovering physical servers onto virtual machines
- Starter kit includes BladeSystem c7000 enclosure, ProLiant BL460c half-height server blade, and 15 half-height device bays

Best For: Implementing internal cloud hosting or shared services models or streamlining operations for outsource service providers.

Price: Starts at \$150,000

(800) 888-9909
www.hp.com

HP Integrity BL870c



Designed to support mission-critical application demands, the HP Integrity BL870c server blade brings the industry-leading reliability, availability, and security found in all HP Integrity servers to the HP BladeSystem c-Class. The BL870c offers dual-core Itanium processing capabilities, memory expansion, and management tools that make it easy to deploy and maintain. iLO 2 (Integrated Lights Out 2) Advanced Pack is standard with the BL870c and offers unprecedented ease in advanced remote server management. It includes a virtual KVM and graphical remote console at no additional cost. HP Systems Insight Manager helps IT organizations save time with simple and reliable hardware infrastructure provisioning monitoring and control.

- Up to 192GB DDR-SDRAM via 24 DIMM slots
- High-performance HP zx2 chipset
- Four hot-plug small form factor SAS disk drives
- Three mezzanine expansion slots to support a variety of I/O mezzanine cards simultaneously

Best For: Enterprises of all sizes.

Price: Starts at \$150,000

(800) 888-9909
www.hp.com

HP ProLiant BL2x220c G6



The HP ProLiant BL2x220c G6 is a two-in-one blade server that provides the compute power of two blades in the physical space of one. This high-performance blade solution delivers extreme density for customers where compute performance and power efficiency are at a premium, such as Web 2.0, cloud, and HPC (high-performance computing) environments. The BL2x220c G6 provides up to two 80- or 60-watt quad-core Intel Xeon 5500 series processors per server node.

- 33% higher memory capacity than the previous generation
- Delivers excellent energy efficiency and leads the blade server industry in performance per watt²
- Ensures power efficiency with HP Thermal Logic, an integrated solution that addresses server power and cooling challenges through onboard power measurement and controls
- Simplifies power management with HP Dynamic Power Capping, a tool that allows customers to reallocate power and cooling resources in the data center by dynamically setting or “capping” the power drawn by the servers

Best For: Data centers that require enhanced power efficiency for clustered physical environments.

Price: Starts at \$6,059

(800) 888-9909
www.hp.com

NEC Express5800 SIGMABLADE/B140a-T Blade Server



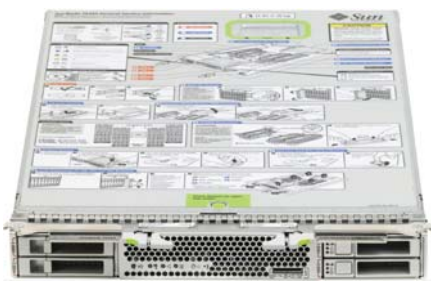
The NEC Express5800 SIGMABLADE/B140a-T is an innovative four-socket blade server based on an energy efficient design and the Intel Xeon 7000 Series. The B140a-T blade server is a powerful server benefiting from performance capacity for processing capability up to 16 cores.

- High performance, taking advantage of performance capacity for virtualized environments using up to four Intel processors to achieve significant overall throughput performance improvement
- Designed for virtualization with higher server bandwidth and more I/O ports (Expanded I/O Gigabit and Fibre Channel bandwidth) to address the increased volume of application and device communications of a virtualized environment
- Up to 128GB of memory
- Compatibility with high-availability software and integrated system management needed for a smart server virtualization solution
- Modular design for simpler maintenance, high quality ratings, and a standard three-year warranty

Best For: Data centers interested in integrated system management through a virtualized environment.

(866) 632-3226
www.necam.com

Sun Blade T6320 Server Module



Powerful enough to run everything from back-office applications to Web services, the Sun Blade T6320 Server Module with the Solaris 10 operating system is designed for fast deployment and maximum eco-efficiency, making it highly adaptable to changing data center needs.

- Up to 64 simultaneous compute threads per module with a four- or eight-core UltraSPARC T2 processor powered by Chip MultiThreading technology
- Increase application response times and reduce energy consumption with flash-based solid-state drives
- Built-in, no-cost virtualization technology with Logical Domains and Solaris Containers
- Hot-swappable disks and no fans or power supply units on the blade
- Up to 79% greater performance, two times more core density, and three times more disk storage than competing blade servers

Best For: Data centers looking to increase deployment rates and go eco-friendly.

Price: Starts at \$9,520

(800) 786-0404
www.sun.com

Sun Blade X6270 Server Module



Designed for enterprise data centers of all sizes, Sun Microsystems' Sun Blade X6270 Server Module with the latest Intel Xeon 5500 series processors is ideal for server virtualization, enterprise applications, and consolidation. Constructed with scalability in mind, the X6270 server module offers up to 144GB of memory via 18 memory slots for 1,333 and 1,066MHz DDR3 DIMMs.

- Designed for memory-intensive applications with up to 144GB of memory
- All-in-one virtualization solution, including server and network, when combined with Sun Virtual Network Express Module
- Up to two quad-core Intel Xeon 5500 series processors (eight cores/16 threads) per server module
- Double the I/O capacity of competing blades and rackmounts
- Up to four hot-swappable hard disk drives or solid-state drives
- Features four PCI Express 2.0 interfaces through a passive midplane

Best For: Enterprises that want to utilize business application virtualization.

Price: Starts at \$2,136

(800) 786-0404
www.sun.com

Is Windows 64-bit Safer?

Microsoft and the tech industry as a whole want enterprises to move to a 64-bit computing environment. Generally, doubling the bits does a lot to make 64-bit Windows the superior option over a 32-bit version of the same OS. For instance, 64-bit systems aren't hindered by the 4GB RAM limit that currently plagues 32-bit OSes.

A recent post on the Microsoft Malware Protection Center Blog goes even further, claiming that a 64-bit OS, particularly Windows 7 64-bit, does a better job of defending your system from malware. The author of the blog post, Joe Faulhaber, cites Microsoft's Security Intelligence Report, which found that 64-bit Windows (excluding Windows 7) "has some of the lowest reported malware infection rates in the first half of 2009." Faulhaber's blog post points out that 64-bit malware is "exceedingly rare in the wild," especially compared to the innumerable volumes of malware designed to exploit 32-bit systems.

An Overstatement?

Alfred Huger, vice president of engineering at security software developer Immunitet, thinks Microsoft's security team may be overstating 64-bit's case. "This claim is pretty broad," he says. "Most malware is nothing more than a user-land program. It can compile for 32- or 64-bit platforms. The question becomes, will someone opt to compile for both or not?"

Faulhaber's post uses Patchguard as an example of a 64-bit-specific technology that thwarts threats and, although Huger admits that Patchguard does have the potential to reduce kernel-based malware infections such as root-kits, "the amount of malware today which operates in the kernel is absurdly myopic relative to the total sum of threats in the wild—perhaps less than 5%." Huger says, "The vast majority of malware is not kernel level. The lack of 64-bit capable malware today is primarily an artifact of its relative adoption. As it grows, so too will the malware distribution to live on top of it."

Huger says that it is risky to deem a 64-bit OS as inherently safer than its 32-bit counterpart, "at least without giving very clear qualifications." Huger says that the average small to midsized enterprise may see a reduced malware threat if it moves to 64-bit software, "but only until 64-bit adoption makes it profitable for malware authors to take the time to compile their threats for 64-bit platforms." It's not a question of if, but when, he says.

by Andrew Leibman



Consider Mainframes

Keeping Them Relevant in SMEs

by William Van Winkle

• • •

THIRTY-THREE PERCENT of global consumer spending flows through Visa's transaction network, VisaNet. When Visa opened its new East Coast processing center, it was designed to not only work as a synchronized failover twin to the existing North America VisaNet center, but it also, according to the company, "paves the way for Visa to deliver new information-intensive applications, such as advanced fraud analysis and mobile payments and services." One might expect such massively powerful, critical systems to run on rack after rack of supercomputing clusters. Instead, Visa developed an operating system with IBM called z/TPF to run on System z mainframe systems.

"From a pure tech viewpoint, you would think that Visa's most modern data center would be rife with buzztech like 'virtualization' and 'clouds,'" says Karl Freund, vice president of strategy and marketing for System z at IBM (www.ibm.com). "Instead, it's anchored by a 40-year-old piece of software [called] 'Transaction

Environmental Concerns

The "green" side of mainframes shouldn't be ignored. IBM (www.ibm.com) notes that the z10 can replace "up to 1,400 x86 servers." This number is in comparison to Sun X2100 servers, which used single- and dual-core Opterons based on 2004/2005 technology. No doubt, the gap narrows when put against the likes of 2009's quad-core Xeon (Gainestown) architecture, but it remains that, given the right type of workload, mainframes can consume far less power and floor space than their x86 competitors. Freund notes that the actual throughput or performance seen by users will depend on a number of factors, such as the amount of multiprogramming in the user's job stream and I/O configuration, among others.

Processing Facility.' TPF is the original code that built the credit card industry in the '70s and all the airline reservation systems of the day."

IBM currently owns more than 90% of today's mainframe market, a segment that many gave up for dead during the '90s. However, IBM mainframe sales are actually growing today as more enterprises (re)discover the value of mainframe solutions: IDC's May 2009 Worldwide Quarterly Server Tracker report showed that "z/OS servers accounted for 9.0% of all server revenue in 1Q09, the highest first quarter revenue share for IBM's System z in five years."

Secure From Inception

Mainframes are "your father's computer system," so to speak. The UNIVAC

Key Points

- Today's major mainframe operating systems descend from designs that are more than 40 years old. This aids in reliability and security.
- Whereas x86 clusters excel in tackling single tasks, mainframes are made to "batch" process many line-of-business tasks simultaneously.
- Given the right type of workload, mainframes can perform faster, save power, enhance reliability, and reduce physical footprint compared to traditional x86 server solutions.

(UNIVersal Automatic Computer) was America's first commercial computer. It was completed in 1951 and delivered to the U.S. Census Bureau by the Remington Rand company. The Exec I operating system debuted on the UNIVAC 1107 in 1964, then owned by conglomerate Sperry Rand. Exec I evolved into today's OS 2200, and Sperry Rand became today's Unisys, the No. 2 mainframe player after IBM. But the fundamental code base used in modern, cutting-edge Unisys ClearPath Dorado mainframes is more than 45 years old.

IBM, already the dominant force in computing by the late '60s, introduced its 32-bit System/360 mainframe in 1964. Today's System z10 mainframes are based on the z/Architecture, which remains backward-compatible all the way to the original System/360.

This legacy is important because, according to Bill Maclean, vice president of ClearPath programs at Unisys (www.unisys.com), mainframes were built to be secure from their inception. "For example, you can't change data into code or move Registry settings around. It's physically prevented by the system architecture." This is why traditional hacking methods won't work on mainframe systems. Even on systems in which the architecture has moved away from proprietary hardware to Intel x86 processors (essentially everyone except IBM), vendors such as Unisys have worked to keep this security native within the platform.

Some vendors go further to enhance security. IBM, for example, has its Cryptographic Coprocessor, which is similar in concept to more common x86 platform options, such as the TPM, but has a few added twists.

IBM's Freund says the Cryptographic Coprocessor can actually self-destruct. "If the card gets too cold or too hot or is X-rayed, or there's a physical intrusion, the hardware responds, causes the erasure or 'zero-izing' of secret data and will force the cryptographic coprocessor into 'Tamper Status,' from which it cannot ever return to normal operational mode again. And it's fast. The Cryptographic Coprocessor can process up to 10,000 secure online 'hand-shakes' per second."


Batch & Cost

Security is only one reason to consider mainframes; another is performance. Many people make the mistake of approaching mainframes with the mindset of a conventional x86 buyer, wanting a full list of I/Ops and other traditional server benchmarks for comparison. This ignores the fact that mainframes and clusters/supercomputers are meant to do largely different tasks. A cluster will typically bring a mass of parallelized resources to bear on a single problem, such as weather modeling or molecular visualization. And storage systems are obviously built for a single purpose: storage.

But mainframes are made to address several business operations simultaneously, such as billing, transaction management, warehousing, and so on. Many operations, such as I/O handling and memory management, have their own dedicated processors outside of the traditional CPU. Because of this, it can be difficult to make direct cross-platform comparisons. Regardless, mainframes are built to perform such concurrent multiple task "batches" in an optimized manner that traditional x86 systems are not.

"In a financial institution, they'll do overnight runs that update accounts and generate reports required for various agencies or just internal transfers of funds," says Unisys' Maclean. "They'll go through entire databases multiple times, pull the information up, and assemble it correctly to generate those reports. You could have a system that does just fine with transaction processing, but if that report has to be done in a four-hour period to deliver it at 6:00 a.m. and your system can't do it, then your system has failed. That's why batch performance is important to many of our customers."

According to Maclean, comparing mainframe performance against, say, Oracle running on an x86 server platform may yield similar results in a low usage scenario. However, a mainframe will prove its value as that application set scales up in volume. The difference isn't in the CPU, which (in non-IBM cases) is the same on both sides of the comparison. Rather, the difference is in the architecture of the operating environment.

Ultimately, the value of mainframes hinges on security, scalability, and reliability, particularly in environments needing "five nines" uptime or better. If an enterprise's data center stakes its competitive advantage on these factors, then a TCO assessment of mainframe options should be considered. 

The fundamental code base used in modern, cutting-edge Unisys ClearPath Dorado mainframes is more than 45 years old.

HOW TO

Test Windows 7

Create A Comprehensive Plan To Prepare For Migration

by John Brandon
• • •

AS WITH ANY application testing process, the plan for deploying Windows 7 in your company is part preparing, part categorization, and part testing. To ease deployment, IT should follow a comprehensive plan that involves categorizing software and hardware and determining a testing strategy.

Surveying The Field

In testing Win7, there is a temptation to just start installing the new operating system on test machines to see how critical business applications will run. After all, this is usually the primary goal: determining whether an operating system upgrade will require major hardware investments and

Next, Kleynhans advises enterprises to survey the applications that will need to run on Win7. A critical error here is that IT sometimes only tests the applications they support, such as a custom ERP application for handling accounting chores or a mission-critical marketing program.

“You can’t take a hardline position that you are only going to test the applications you support,” he says. “You have to take ownership for the applications that users have snuck in and are using in their own environments.” He adds that this is an often overlooked step but an important one, because unsupported apps might be part of a critical business process and are sometimes the apps that do not work well with a new operating system.

“There really is no silver bullet in terms of testing to make sure Windows 7 will work in your environment. It takes time and effort; there is no getting around it.”

- SystemExperts’ Philip Cox

software upgrades. However, Gartner analyst Steve Kleynhans strongly warns against this approach. He says the first step for an SME is to instead create a solid inventory of the hardware and software in the company.

However, this process is not necessarily about surveying the PCs in a company, he says. In many IT organizations, the actual PC hardware will change over the next few months and in the coming years, and because a Win7 deployment today could still be in place over the next decade, he advises enterprises to survey the peripherals, as those will likely remain more constant than the actual PCs.

- TOP TIPS
- IT should have a plan of action and prioritize the software and peripherals that will use Windows 7 rather than just installing the new operating system on test machines to see how critical business applications will run.
 - This plan should involve creating a solid inventory of the hardware and software in the company now and what is expected to be there in the future.
 - Be sure to check unsupported applications for Win7 support. Though it’s unfeasible to test everything, you still need a framework for knowing which apps are in the field.
 - Avoid some common pitfalls when rolling out Windows 7. “Not having a testing matrix, not having access to all of the applications available before and during migration, and not having a repeatable process are all issues,” says Travis Davis, senior systems engineer at Matrix 42 (www.matrix42.com).

“The main benefit of the testing will be to identify critical applications that will cease to function as you expect if you upgrade,” says Philip Cox, a consultant with SystemExperts (www.systemexperts.com). “Identifying these showstoppers and figuring out how to remedy the problem should be the main goal. If you can do that, your testing will be a success.”

The Testing Process

Kleynhans says that after categorizing peripherals and software, the next step is to prioritize the testing process. This involves determining exactly which software apps are critical to business operations, and it can be as simple as a spreadsheet or can involve a comprehensive database. One benefit to this prioritization and categorization is that you will know which peripherals, PC hardware, servers, and software are installed and are part of business operations.

Cox says that after this categorization and prioritization, the next logical step is to contact software and hardware vendors to see if, according to their own testing, the products you own should work with Win7, which serves as a good reference point for the testing process. This is sometimes a neglected step because IT might be in a hurry to start testing at this point.

Next, an SME should set up a testing environment that consists of sample hardware. Part of this lab configuration process should be determining which IT staff members will be available for testing and record-keeping. And, IT should also assemble any testing tools for the Win7 migration. Cox recommends a virtual server to host multiple Win7 instances and checking software and hardware vendor Web sites for specific Win7 information.

“There really is no silver bullet in terms of testing to make sure Windows 7 will work in your environment. It takes time and effort; there is no getting around it,” he says.

Kleynhans suggests the Microsoft Application Compatibility Toolkit as an important tool, because it provides a good overview of which applications should test out well and which ones might cause headaches.

Of course, after establishing the testbed, prioritizing, using tools to help with migration, and making sure staff have enough time to perform testing, the next step is to perform the actual testing. This may be a time-consuming process, but most IT experts agree that the more you test a new OS, the fewer surprises you will have down the road.

Pitfalls To Avoid

Kleynhans says that one common pitfall in testing Win7 has to do with Web applications. Often, an OS deployment means switching browsers—in this case, upgrading to Internet Explorer 8—and some Web apps may not run correctly afterward, especially if they use ActiveX controls. He says a major part of the testing process is just taking the time required to test these kinds of apps, finding workarounds, and making sure the Web apps have the necessary components installed.

Another potential problem has to do with 64-bit support. Many enterprises have been avoiding the 64-bit version of Windows, but Kleynhans says this version will likely catch on in the next few years, and it is best for IT to know which vendors have applications that support the 64-bit version.

Travis Davis, a senior systems engineer at Matrix 42 (www.matrix42.com), a service management company that advises SMEs on migration, says the most common

Key Points

- Before deployment, figure out which software and peripherals will use Windows 7.
- You should prioritize software for migration.
- Make sure you test using a repeatable, reusable process.

pitfall in testing Win7 is not having a repeatable process as part of the testing methods. In other words, an IT manager might be reinventing the wheel for every new software test on Win7, which can lead to major delays.

The Benefits

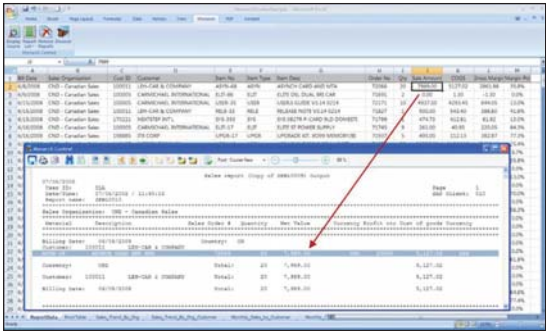
Although the testing process might seem like a Herculean undertaking for an SME, the advantages are clear. According to Davis, SMEs can be 90 to 95% certain they will know the outcome of migration after testing. Cox adds that testing will also help determine how much a migration will cost in terms of required software and hardware upgrades. This will reduce the amount of lost revenue from apps that do not work.

Thorough testing also lets IT focus on other tasks rather than migration problems after deployment and creates a knowledge base of software, hardware, and peripherals. But most importantly, a smooth transition to Win7 means less impact on business operations and results in happy IT customers. [E]

DATAWATCH MONARCH V10.5

NEW PRODUCT

by Kris Brambila



Datawatch Monarch V10.5
A data mining and analysis tool that extracts data from original reports and allows the source report to travel with an Excel file for compliance.
Starts at \$699/single user;
\$2,649/four users

Uncover Hidden Data Faster

SEARCHING FOR, organizing, and analyzing data can cost businesses valuable time and money. Datawatch’s Monarch V10.5, the company’s flagship technology, is a business intelligence solution that can extract vital data from reports created in any information system and transform it into actionable data.

“It is more critical than ever to give users the ability to extract maximum value from the assets that already exist within their organization,” says John Kitchen, Datawatch’s Senior Vice President and CMO.

Unlike other data analysis tools, Monarch requires no special training or IT help. “Anyone in the organization can access and work with critical data and then transform it into live, actionable data for sorting, filtering, summarizing and exporting to other applications,” Kitchen says.

Monarch can obtain data from any file, including PDF, TXT, MDB, DB, DBF,

WKx, HTML, SQL, ASCII and more. Monarch’s latest version, 10.5, also offers spreadsheet compliance and allows users to create an XLSX/XLSM report to keep track of original Excel spreadsheet data. “Users now have the ability to create and export Microsoft Office Excel spreadsheets containing the original source of the data, without programming, database work or altering any of their current system. This eliminates spreadsheet-induced uncertainty, reduces the audit cycle and eases compliance,” Kitchen says.

Kitchen emphasizes that Monarch will help SMBs to better manage their business, without the cost of programming training. “[Monarch] helps companies gain insight into operations and customers, better manage costs, spot opportunities for growth, and empower users with more Excel-based, compliance and auditing capabilities,” he says.

FEATURED COMPANY

The Hosted Services Advantage

IBM Global Services Makes Technologies Affordable, Taking Financial Pressure Off Of SMEs

by William Van Winkle

IBM DOESN'T PLAY AROUND with commodities. When the PC market became cloned and commoditized from top to bottom, the company sold off that division in search of greener pastures. These days, Big Blue's greenest pasture is with enterprise business services, anchored by its software- and services-led business model. The model is one that many hardware vendors whose businesses are becoming commoditized are eager to emulate—in the past 18 months, several companies have acquired IT services

Another common example is data protection, such as email communications. A platform such as Exchange can be backed up either on-premise or through colocated hardware, but this also means more hardware to buy and maintain, more software to configure and license, and more operational complexity in general. Outsourcing this as a managed service can not only drop the total cost of the service but also result in more reliable protection because the provider has developed deep expertise in the task combined with faster, better-protected infrastructure.

GBS). GTS concentrates on outsourced technical services, including high-availability apps, networking, and storage services. These are administered from more than 100 IBM data centers around the world comprising more than 6 million square feet. GBS focuses on consulting and represents the fusion of IBM and its acquisition of PricewaterhouseCoopers in 2002. This group specializes in assisting companies, particularly mid-sized groups, with management services ranging from financial to supply chain to customer relationship.

In recent years, IBM has started deploying its Research arm to assist its Services divisions. In many cases, researchers work directly with IBM clients to devise new solutions that can then potentially be applied across numerous clients.

The Secret Sauce

IBM likes to talk about the roots of its value proposition being quality, productivity, and innovation, all three of which are achieved through process automation and skills. The key element within IBM Global Services over the past two years has been the company's Global Delivery Framework, or GDF. This is a standard methodology used to group clients and work teams and then define both how IBM will work for these clients and how the work should be segmented. With clients all around the world, there are a seemingly endless number of variables, business models, and scenarios IBM must grapple with, and not even IBM can reinvent the wheel for each client.

"In the past, the world was largely custom," says Dzaluk. "We were rarely able to apply investments and automation beyond a specific client. We would work with them and conceive and create automation tools, but it was inefficient, non-scalable, and it didn't leverage IBM's intellectual property. So we've made some tremendous effort and advances in automation. We've now got a standard tool set."

GDF allows IBM to apply economies of scale across its client groups. At the

same time, having a common tool set and solution methodology allows IBM to focus on quality metrics and service management. With many providers, such an approach might yield a "cookie cutter" strategy wherein one solution allegedly (and unsuccessfully) fits all. GDF works

IBM GLOBAL SERVICES

(877) 426-2223
www.ibm.com/services

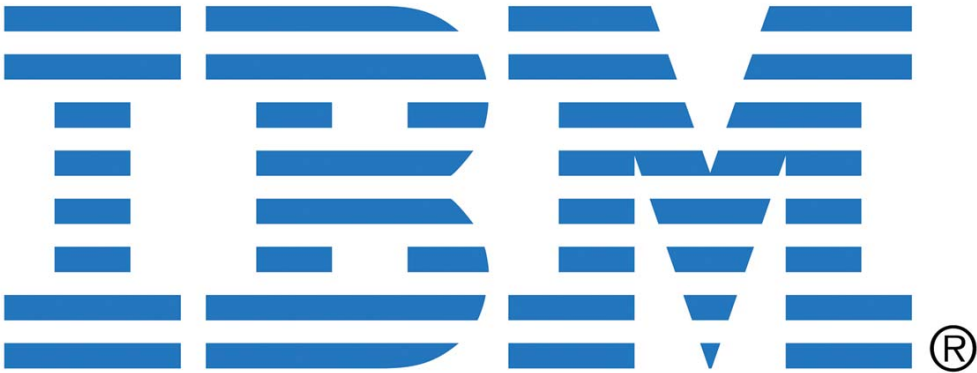
- IBM Global Services offers SMEs access to technologies that they may not otherwise be able to afford.
- The division allows SMEs to pay only for what they need, which is a boon in today's age of economic hardship.
- "By turning to a security solution provider like IBM, [SMEs are] freed from having to monitor their equipment, which may require additional manpower," says Joe Dzaluk, vice president of global infrastructure and resource management for Global Technology Services at IBM.

because IBM is careful to apply the correct staff and expertise in each situation, suiting the methods to the client, not the client to the methods. This is how IBM can address 15 major industries in more than 100 countries, have its services all possess the same essential look and feel, and yet end up with a well-tailored solution that fits each individual enterprise. As the organization and its needs grow, IBM Global Services has the regional resources present to accommodate just about any infrastructure need.

"Bigger customers can always make tradeoffs for cash and capital," says Dzaluk. "Smaller customers can't, and the last thing you want to do as a smaller customer is buy capacity, then have a downturn and be sitting on idle capacity. The advantage of coming to a company where we can offer you scalable solutions is that you basically pay for what you use. That fact gives smaller companies the most leverage." ■

IBM Global Services In Action

To understand IBM's Global Services division, take for example the USGA (United States Golf Association), the organization that governs professional golf in the United States and Mexico. IBM provides the USGA with information protection, email recovery services, and a comprehensive infrastructure recovery solution. The golf organization has about 500GB of critical data that gets backed up to IBM's cloud-based backup service, and IBM's email service protects the group's Exchange data. These are the core data assets on which the group lives and breathes. In the event of a natural disaster, the USGA could take the traditional path of colocating or reserving hardware resources at a remote provider, but that would require too much expense for an arrangement that would still require substantial recovery time. Instead, the USGA maintains a secondary site at an IBM facility in New York State, with servers and trained personnel ready to re-create the organization's environment if necessary.



companies in a bid to boost their portfolios and appeal to clients. Amid the tumult, IBM is moving quickly and investing deeply in software, services, and research to move its Global Services division into the higher-end services that clients desire and that few competitors have the ability to offer.

Not Just For The Fortunate Few

IBM's list of services clients is a long one; however, one group in particular—small and mid-sized enterprises—often lacks the deep IT resources of their larger counterparts. Because SMEs tend not to have the deep pockets needed for major end-to-end platform overhauls, systems tend to get implemented in a piecemeal fashion. This saves money on the front end, especially when budgets are tight, but ultimately the fractious sprawl of technology bits and pieces becomes ever more cumbersome to maintain. Obviously, one large platform is easier to manage than half a dozen small ones, but the expertise necessary to consolidate that patchwork without a major disruption to operations is beyond most SMEs. This is only one of many scenarios in which an organization might turn to IBM Global Services (www.ibm.com/services). It's one instance of a business need to increase simplicity and efficiency. Cultivating those transition and management skills internally only increases complexity. The better route most often is to outsource such needs to a highly skilled global services provider such as IBM.

"Our small-business clients are coming to us for outsourcing non-core functions and in areas including network security, desktop management, business resiliency, and IT infrastructure," says Joe Dzaluk, vice president of global infrastructure and resource management for Global Technology Services at IBM. "An example is IT security. As more and more businesses start establishing an online presence, they're required to be more vigilant about security on the Internet. By turning to a security solution provider like IBM, they're freed from having to monitor their equipment, which may require additional manpower. They also don't have to worry about security issues, such as firewalls or software licensing."

Meet IBM Global Services

Enterprises often think of business continuity services as a recent development, going hand-in-glove with cloud infrastructure. But IBM debuted its Business Recovery Services way back in 1989, supplying services for companies that wanted protection against outage or disaster. The idea took root, and by 1995, IBM formed IBM Global Services, which soon became the world's largest IT services provider. Today, about 60% of IBM's total annual revenue—\$58.9 billion out of \$103.6 billion in 2008—comes from the IBM Global Services division.

IBM Global Services comprises two areas: Global Technology Service (or GTS) and Global Business Service (or

Little Room For Error

Common Mistakes To Avoid In Data Center Setups

by Sandra Kay Miller

• • •

FOR ENTERPRISES setting up a new data center, renovating their existing one, or just moving around equipment, careful planning is a necessity in order to avoid frustrating and sometimes costly mistakes. When Cisco (www.cisco.com) brought its 29,000-square-foot data center online in Texas in the latter part of 2007, Douglas Alger, Cisco’s IT architect for physical infrastructure, focused on the systems required to maintain uptime. “As businesses become more dependent on their data centers, it’s critical to build the best possible facility,” says Alger. There are several key areas in which good forethought and attention to detail can make a significant impact on overall performance and profitability within the data center as well as eliminate potential headaches and costly downtime.

Not Enough Power & Cooling

The growth of a data center is often due to the need for more computational power. In turn, servers place a greater demand on power and cooling. ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org) has found that as server power density has increased, data centers have had to grow their infrastructures—mainly power and cooling—to support the demand. With infrastructure and energy costs now exceeding the price of the servers themselves, focusing on power and cooling optimization is paramount when setting up a new data center or expanding existing facilities. When Alger designed the Texas facility, he deployed a system plus system physical design, which is basically two complete standby systems. This means that if any of the components within the facility goes offline unexpectedly, power, cooling, and connectivity will be maintained. This included having two separate utility and

Although Alger’s approach to the overall data center design can help avoid many of the common issues, Neil Rasmussen, chief innovation officer of APC (www.apc.com), points out that facilities managers are often blamed for power and cooling issues caused by inefficient configuration and installation of IT equipment outside of their scope. One example is when cabinets are not configured in hot and cold aisles, meaning cabinets are arranged in alternating patterns facing each other so the exhaust from two rows can be funneled into a single row. Facilities can provide the requisite power and cooling, but an inefficient room layout can unexpectedly add to the requirements.

Raised Floors’ Flaws

There are a multitude of mistakes made when it comes to raised floors in the data center. First, start with the actual materials from which the raised floor is constructed. Although most raised floors are constructed of newer manufacturing techniques, equipment manufactured overseas may still use older zinc-electroplating methods that can lead to zinc whisker contamination. Next, plan for the depth to deliver the air plenum required to adequately cool the data

The growth of a data center is often due to the need for more computational power. In turn, servers place a greater demand on power and cooling.

center. Even with enough space in the sub-floor, a common mistake is blocking air-flow with obstructions such as cables and conduits. Similarly, the improper placement of perforated floor tiles in a raised floor can significantly hamper efficiency. For existing data centers moving equipment or implementing upgrades, be certain to maintain raised floors, keeping the plenum air space free from dust and debris, removing unused cables, and making necessary repairs to broken or damaged tiles—all of which hamper the efficiency of the floor.

Beware Of Greenwashing

Everyone wants to go green these days. Although vendors are hyping their latest products’ optimum power efficiency, it pays to do the math and figure out exactly what the energy savings would be within your own deployment. The U.S. EPA’s (Environmental Protection Agency) Energy Star program has established metrics for data center server equipment—PUE (power usage

Key Points

- Power and cooling requirements are growing rapidly. Be certain to plan for future expansion.
- Keep an eye on raised floor construction and maintenance to ensure efficiency.
- Don’t take a vendor’s word on its products’ “greenness.” Use established metrics to determine the power efficiency of your systems.

effectiveness). PUE is the total power entering the data center divided by the total power used by IT equipment inside. Metrics close to one are optimal, but the average data center today is 2.5, suggesting overall improvement. Similarly, the SNIA (Storage Networking Industry Association) has also developed metrics to help data centers determine the number of gigabits per second for every watt of power and inputs/outputs per second from disk for every watt of power.

Not Knowing Your Business

Michael Manos, senior vice president of technical services for Digital Realty Trust (www.digitalrealtytrust.com),

“Godfather Of Spam” Receives Prison Sentence

Alan Ralsky, the 64-year-old Michigan resident who proclaimed himself the “godfather of spam,” was sentenced in late November to 51 months in prison in a Detroit federal court on charges of conspiring to commit wire fraud, committing mail fraud, violating the CAN-SPAM Act, committing wire fraud, and engaging in money laundering. Three others, including Ralsky’s son-in-law Scott Bradley, also received sentences from U.S. District Judge Marianne O. Battani related to the



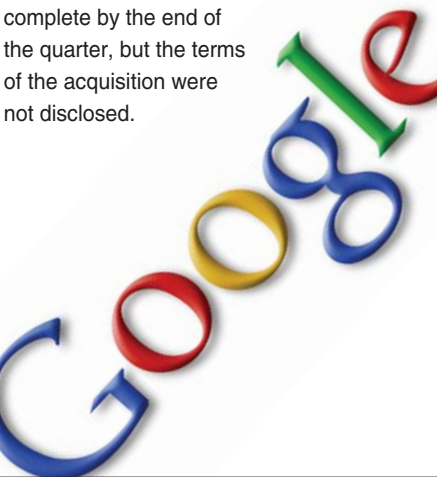
case. By sentencing the four for their roles in a complicated stock spam pump-and-dump scheme, “the court has made it clear that advancing fraud through abuse of the Internet will lead to several years in prison,” says Terrence Berg, U.S. attorney for the Eastern District of Michigan. According to a U.S. Department of Justice statement, from January 2004 to September 2005, Ralsky and others allegedly engaged in a set of conspiracies to use spam emails to manipulate thinly traded stocks and profit by trading in those stocks once their share prices increased after recipients of the spam emails traded in the stocks being promoted.

Survey Shows Windows 7 User Satisfaction

Tech news site Technologizer surveyed 550 Windows 7 users and found them to be generally satisfied with the new OS. About 70% of the new Win7 users say they are extremely satisfied, while 24% say they are somewhat satisfied. Users who moved from Vista show a 95% satisfaction rate, and users who moved from Windows XP have a 94% satisfaction rate. Although 79% of former Vista users are extremely satisfied with Win7, just 61% of WinXP users say they are as enthusiastic about the experience thus far. According to Technologizer, the disparity is likely due to the large number of WinXP users who were satisfied with that OS. Despite the lack of excitement from some former WinXP users, 61% report that they definitely wouldn’t and 31% say they probably wouldn’t go back to WinXP.

Google Acquires Display Advertising Startup Teracent

Google announced it will acquire display advertising startup Teracent as part of its efforts to increase its share of the display advertising market. The technology that Teracent has developed can customize display ads in real time based on factors such as the user’s language, location, and local time; the ad’s previous performance; and content of the Web site he is viewing. Google believes Teracent’s technology will allow its advertisers to achieve more success in their display advertising campaigns. The deal is expected to be complete by the end of the quarter, but the terms of the acquisition were not disclosed.



Quick Tips

- Label everything, especially cables on both ends.
- Create detailed maps of infrastructure, such as network and electrical connections, under the raised floor.
- If furniture and equipment doesn’t need to be on a raised floor, don’t put it there.

network feeds for the facility. “If one of the lines were to be cut, we’d still be operational,” explains Alger. Alger takes the system plus system design right down to each rack to ensure power and networking are delivered from two separate sources for added redundancy.

Survey Shows Security Concerns About Former Employees

Even as enterprises have had to deal with staggering economic difficulties this past year, they have also been forced to struggle with an increasing number of threats, according to Ernst & Young's 12th annual Global Information Security Survey of about 1,900 CIOs and other high-level IT execs worldwide.



"Our survey shows the levels of internal and external risk continue to rise," says Ron Koch, executive director with Ernst & Young LLP's Information Technology Risk and Assurance Services practice.

More than 40% of survey respondents say they experienced increased levels of attacks from external sources during the year. Moreover, a quarter say that internal attacks are on the rise this past year, and 13% say that there are more cases of internal fraud.

But the part of the report that's grabbing the lion's share of attention is the fact that a third of respondents are "very concerned" about the fury of departed employees. "This year, respondents noted that reprisals from recently separated employees have become a major concern," says Koch.

Risks Of Former Employers

With inside knowledge of a company's systems, former employees could be a data theft or malware introduction risk for their former employers. "To handle such risks," Koch says, "companies should develop responses aimed at dealing with employees likely to leave the organization as a result of the economy."

About 26% of those surveyed are implementing strategies to reduce the related level of risk. Another 42% describe themselves as "somewhat concerned" that former workers could exact some sort of revenge for being fired or laid off during the economic downturn and are looking into the risk factors involved. A quarter of those surveyed aren't worried about the issue.

When compared to results from the 2008 survey, 17% more of the executives surveyed this year say that security budgeting is a "high" or "significant" challenge. Half of this year's respondents describe their IT security budget process as such in the latest survey. Slightly more than half (52%) will spend the same amount of money on cybersecurity as before, but 40% will bump up the percentage of money they allocate to it.

"Availability of adequate budget continues to be one of the greatest challenges to effectively deliver information security initiatives," says Koch. "Companies need to develop a risk-based security strategy, aligned to key business drivers, that will help justify budget requests and ensure that scarce resources are being allocated effectively."

by Marty Sems

Meeting IT Demand Growth On A Budget

IT Executives Should Use "Down" Years To Develop Plans For Cost-Efficient Growth

by Kurt Marko

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THE ECONOMIC HEADLINES have been frightful for more than a year, and although signs of improvement emerged last summer, increasing unemployment and weak consumer spending portend a slow recovery, leading business executives to keep a tight rein on spending, including IT budgets.

Key Points

- IT budgets will stay below 2008 levels for several years, but demand for new IT services and capacity is likely to resume earlier; thus, IT executives need to develop plans to meet the needs without a corresponding increase in spending.
- Cloud-based services and SaaS are a good fit, so managers should seek opportunities to exploit online external service providers for noncore or commodity IT functions.
- Server virtualization will move beyond mere consolidation efforts to include disaster recovery and application load balancing, while desktop virtualization is poised to become a major, and perhaps the dominant, client deployment model.

In the face of unrelenting demand from business managers and end users, what's a beleaguered IT executive to do? "Ignore the negative financial press coverage and prepare for a return to business growth, regardless of when the growth actually returns," advises Gartner Vice President and fellow Ken McGee in a report outlining recommendations for returning to business growth. He believes that the first signs of customer resurgence and a more stable macroeconomic environment will cause business managers to demand new IT projects and services, despite tight budgets.

Given the recession's depth, Burton Vice President and Service Director Chris Howard believes the climb to recovery will be long and arduous. IT executives need strategies to meet the inevitable increase in workload and service requests without asking for new funding.

Economic & Technology Trends

Although GDP grew in the third quarter, McGee sees this as more a function of temporary government stimulus spending and not a sign of sustained, organic business expansion. He advises CIOs to plan for a zero-growth budget in 2010.

In a recent executive planning guide, Howard notes that the pain isn't over. "In spite of recovery projections, reverberations from the economic crisis will continue throughout 2010," he says. Furthermore, he sees the crisis leading to permanent changes in IT. "As the economy recovers, those organizations that have strengthened management disciplines are in the best position to succeed. We will emerge from the crisis looking different than when we went in."

Given the recovery's uncertainty and the impossibility of predicting IT demand

growth, Jack Santos, executive strategist at Burton, says the environment is propitious for cloud services given their usage-based pricing and lack of up-front capital expense. He says business execs increasingly view IT as a service, meaning IT managers must operate accordingly and seek ways to grow that primarily rely on variable costs. "IT used to be like buying a car; now it's like paying for a taxi," he says.

McGee says the most important step IT can take to cope with new financial realities is to adopt zero-based budgeting—essentially a process where all IT expenses, projects, and services are reviewed and must be justified in each budget cycle. In this scenario, he says, every project request must have a business unit executive sponsor willing to affirm the necessity for a project's one-time implementation expenses (both operating and capital) and recurring annual costs. This practice can facilitate the decommissioning of old applications and services—something IT has historically been lax about—and free up resources for new projects.

A proliferation of obsolete or unused IT services stems from poor portfolio management. Santos says that's why it's important for IT to "understand what you have and how you can eliminate some of your legacy." Because this requires cooperation from users and business execs, it's easier said than done, Howard says. "There's only so much IT can do on its own." Better portfolio management also enables IT to define variable-rate, usage-based services and use chargeback accounting to better align resource consumption with business demand and actual use.

Technology & Services Strategies

The opportunistic use of cloud computing is a key strategic issue McGee sees IT managers needing to address next year. At Gartner's recent Symposium/ITxpo, he recommended managers not fund new infrastructure modernization until after deciding upon a cloud strategy.

"By explaining today's request for infrastructure and operations modernization funding within the context of cloud computing in the future, executives are less likely to feel that they are paying twice for modernization when cloud computing is officially adopted," he says.

Burton analyst Richard Jones offers several examples of where small to midsized enterprises could put cloud computing to use, including dynamic compute and application services for highly variable, seasonal, or noncritical applications and storage for backup and disaster recovery. Howard

adds other examples, including mature, existing IT services, such as email or collaboration, or new applications, such as CRM or ERP, that require significant up-front investment to implement internally.

IT must also use existing resources more efficiently, an imperative that has fueled the adoption of server virtualization. According to McGee, "if you're not already using virtual servers, you're behind." Burton's analysts believe VMs must become the default deployment model for all new servers, while McGee sees virtualization moving from server consolidation enhancing application availability and reliability through live migration, automation, and orchestration technologies.

Jones says other strategies that let data center managers do more with less include migrating proprietary RISC servers to virtualized x86 systems as they become obsolete, planning for a unified data and storage network using 10GbE and iSCSI or FCoE SANs, and using modular data centers (data centers in a box) for facility expansion in lieu of new construction.

Outside of the data center, Citrix Systems (www.citrix.com) believes 2010 will be the year of desktop virtualization, as it progresses on a technology trajectory similar to that of its server counterpart. John Humphreys, senior director of product marketing for the Virtualization and Management division at Citrix, says desktop virtualization still lags the server side by a generation or two, but he notes that significant technical advances improving the overall user experience, along with support for smartphones, continued concerns over controlling client security, and the arrival of Windows 7, are prompting more enterprises to see desktop virtualization as a preferred client deployment strategy.

Dramatic Changes

2010 should be a pivotal year for IT as technology trends and the economy converge to rend dramatic changes. As Howard summarizes in his recent executive planning guide, "IT professionals find themselves at a critical junction in the decade beginning in 2010. Choosing one path, they have the opportunity to become proactive strategic partners within their businesses. Choosing another, they persist as a reactive organization that is gradually being eroded by the availability of commodity IT." McGee advises using this period before robust growth resumes to optimize IT's cost and governance structure and develop plans for managing the inevitable return to expansion. ■

Worldwide End-User Spending On IT

The global economic downturn may be easing, but IT budgets are still being cut, and consumers will need more persuading before they feel confident enough to spend more. Worldwide IT spending is forecast to total \$3.2 trillion in 2009, a 5.2% decrease from 2008 spending of \$3.4 trillion. Worldwide IT spending is expected to return to growth in 2010, as revenue is projected to reach \$3.3 billion, a 3.3% increase from 2009.

SOURCE: "GARTNER PERSPECTIVE: IT SPENDING 2010"; SEPTEMBER 2009.

OPINIONS

INFO-TECH • INSIGHT

New IT Leaders: Don't Be A Snob

After months of preparation and round after round of grueling interviews, you've finally landed that IT leadership position. You know that the role of an IT leader is to build bridges between IT and the business side of the organization; you need to enable business leaders to further their objectives through the strategic use of IT. You're an IT leader now, so it's all about forging relationships with business leadership, right?

Wrong. Research findings collected by Info-Tech show that one of the biggest mistakes made by leaders in their early days is over-focusing on the business leaders and failing to foster relationships with their new staff. IT leaders that are just starting are often very nice to upper management and bend over backward trying to earn credibility in the business' eyes, but when it comes to their own staff members, they build distance; they develop a snobbish, arrogant attitude towards their technical teams.

Loyalty Is Essential

Don't get me wrong, it is very important for new IT leaders to build relationships with business leadership. Senior business leader-



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ship needs to regard the IT leader as a trusted adviser, and a partner that understands their business concerns and that takes strategic action. However, this by no means implies that it's not crucial for new IT leaders to earn the trust of their staff, too.

It's dangerous to ignore your staff in the first 100 days of IT leadership. It will take committed staffers to implement all of your quick wins and your long-term initiatives. This commitment will greatly stem from the loyalty you have bred with your team. You need your staff to believe in you on technical and personal levels to ensure that they buy into your ideas. If you're new to the organization, you'll also need your staff to fill you in on any of the IT department's historical baggage and to give you a heads up if they

see you falling into the same traps as your predecessors. Furthermore, if your staff does not have confidence in you, they could leave you in the dark when they run into problems. This could have devastating consequences; the problem could grow before you have time to find a solution.

It's essential to start breeding staff loyalty from the very beginning. If you neglect your staff at the outset, you will project an irreparable first impression of being on the business' "side" when in fact they should see you as someone who will stick up for them, someone who is part of their team. Building a trusting relationship with your staff is a gradual process that must start as early as your first week on the job.

Foster Good Feelings

The question is: What simple steps can you take to breed staff loyalty in your first week of leadership? With the following easy techniques, you can set the right foundation with your staff and still retain the time and energy to build credibility with business leaders:

- **Establish an open environment.** Sit with staff members one on one and ask them to tell you what they do, what they like about their jobs, what they don't like about their jobs, and what they think should be done that is not being done. It's essential to use

the data collected from these answers to follow up on good suggestions, make future decisions, and to openly communicate these decisions back to the team. Remember, however, to keep certain observations confidential so as not to abuse staff's trust.

- **Show you're part of the team.** One VP of IT recalled, "In my first week, I actually sat with the team in their space, in one of the cubicles. After that, I continued to regularly work long hours with them. This helped me understand my department's dynamics and how I could influence it."
- **Spend time socializing.** Get to know your staff on a personal level. Make sure that you attend company-wide family and sporting events and also establish departmental social activities such as going out for lunch, dinner, or even bowling or canoeing.
- **Try some offsite activities.** Take the IT department offsite for introductions, discussions on the change in leadership, and some team-building activities. Going off-site encourages free and open sharing, and it gives the feeling of a fresh start with a new leader.

The key to getting staff buy-in is communicating to them how what they're doing fits into the overall goals of the company. If you find yourself in an organization where the business leadership needs extra attention, for reasons such as a history of antagonism between business and IT, then openly relay to your staff that you need to primarily focus on the business. By engaging your staff in your strategy, you will ensure that they are right behind you when you need them.

FROST AND SULLIVAN

Get More From Managed Service Providers

This holiday season, many network managers' wish lists will include a request for an extra set of eyes or pair of hands. Increasingly, the wish will be fulfilled by an MSP (managed service provider).

As their IT environments grow more complex, small and mid-sized enterprises are discovering the new services and technologies they've introduced require continual care and feeding to deliver on promised benefits. Enterprises are recognizing that few elements of their IT environments are "set it and forget it." They need to protect their investments and ensure optimal performance. They need to be able to redefine the term "optimal" based on changing business needs. This requires continual monitoring and tweaking, which calls for knowledge, resources, and tools that few SMEs have on hand.

Enter the managed service provider. A true MSP builds a collaborative relationship with the customer, proactively sharing performance data and making real-time changes to the environment to meet the customer's business objectives. The relationship is like that of a savvy investor and his financial advisor: the advisor brings his specialized tools and knowledge, but the investor has a clear set of goals and is deeply involved in every decision to help attain them.

The problem for many SMEs is that the market for managed services has grown so rapidly that in many areas, demand exceeds supply. Frost & Sullivan estimates the \$18.6 billion market is growing at more than 8% per year, with nearly half of mid-sized companies making some sort of investment in managed services. The current economic

recession has had little impact on market growth, with MSPs and enterprises alike reporting increased spend in managed services.

With that sort of opportunity at stake, it's no wonder that thousands of IT vendors, including systems integrators, resellers, and consultants, have made plans to offer managed services. However, it takes more than good intentions to turn a VAR into an MSP.

Choosing An MSP

When selecting an MSP, look for:

- **Robust technology platform.** Performance data is the foundation of a managed service, and the MSP needs to employ a management platform that is highly functional, flexible, and easy to deploy and use. The platform should offer a portal that lets customers see the same real-time performance data that the provider sees. In addition, look for reporting capabilities that meet your needs: It doesn't matter if the platform offers a hundred standard reports if you still have to reconfigure the data for your quarterly presentation to the board.
- **Service-oriented business processes.** VARs that have successfully made the transition to MSP are those that have adopted new workflows that focus on

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relationships rather than projects and emphasize proactive, rather than reactive initiatives.

- **Skilled technical employees.** Managed services require a high degree of investment in human capital, more so than reactive "break-fix" maintenance contracts. Before you hire a former VAR, be sure it has increased staffing for its new role.
- **Regional presence.** Most technology platforms offer remote management. But it's wise for enterprises to select an MSP that maintains a local physical presence. This lets them build and maintain the relationship through regular face-to-face meetings. And although 80 to 90% of issues can be resolved remotely, there still will be cases where an onsite visit is necessary.

Maximizing ROI

Companies generally build their business case for managed services by calculating cost avoidance for equivalent on-staff resources. They may also factor in additional facility costs such as bandwidth that can be delayed

or avoided through ongoing optimization. And the case will reflect the value of tapping the operating budget vs. the capital budget.

To continue to get the most from their MSPs, companies must uphold their end of the relationship.

Continually review your business priorities with the MSP. Have you added new, high-bandwidth applications? New partners or customers in different parts of the world? Work with the MSP to determine how changes impact your needs related to cost and application delivery.

Use the data in business planning. Managed services data provides a valuable window on your network usage, and real-time tweaking offers dramatic and immediate evidence of the value of optimization techniques. Share the data reports with business leaders to justify your network spend and to help plan future investments.

Look over the MSP's shoulder. MSPs report that some of their best customers keep the portal open all day and question every anomaly. Although that level of involvement is impractical for most SMEs, it's wise to keep an eye on the real-time data, rather than wait for quarterly reports. A good MSP will appreciate the collaborative approach and use the opportunity to better understand your priorities.

The right MSP can pay for itself in enhanced network performance and avoidance of capital costs. And that can make for a happy new year for the entire business.

Processor Solutions Directory

Here are brief snapshots of several companies offering products designed for the data center and IT industry. Listings are sorted by category, making it easy for you to find and compare companies offering the products and services you need.

You can find more detailed information on these companies and the products they offer inside this issue.

To list your company and products, call (800) 247-4880.

PHYSICAL INFRASTRUCTURE

AUSTIN HUGHES

Founded in 1995, Austin Hughes Electronics is a design and manufacturing company offering a broad range of electro-mechanical products based on 19-inch rackmount technology. Austin Hughes has ISO 14001 & 9001-approved design, manufacturing, assembly, and test facilities in Hong Kong and China. It has sales offices throughout the Asia-Pacific region as well as Europe and the United States, supporting a worldwide distributor network.

Products Sold:

- Rackmount LCD keyboard/KVM drawers
- Rackmount serial console LCD keyboard drawers
- LCD screens

www.austin-hughes.com

PHYSICAL INFRASTRUCTURE

AVTECH

AVTECH Software, founded in 1988, is focused on making the monitoring and management of systems, servers, networks, and data center environments easier. AVTECH provides powerful, easy-to-use software and hardware that saves organizations time and money while improving operational efficiency and preparedness. AVTECH products use advanced alerting technologies to communicate critical status information and can perform automatic corrective actions.

Products Sold:

A full range of products that monitor the IT and facilities environment, including temperature, humidity, power, flood, room entry, and UPS

(888) 220-6700 | www.AVTECH.com

PHYSICAL INFRASTRUCTURE

BayTech

BayTech was founded in 1976 and, since the 1990s, has developed unique products for remote power management. The company uses printed circuit board instead of wires for a better, more resilient connection between the data center equipment and the receptacle. BayTech provides an extensive Web site with brochure downloads, warranty information, and reseller support and also offers evaluation units for data centers.

Products Sold:

- Power control, distribution, management, and metering
- Power transfer switches
- Console management and remote site management

(800) 523-2702 | www.baytech.net

PHYSICAL INFRASTRUCTURE

CHLORIDE

Based in London and founded more than a century ago, Chloride provides sales and service of power protection products for a variety of international customers in the retail, industrial, biomedical, and data communications markets. Originally a manufacturer and supplier of batteries, Chloride purchased its first power protection company at the start of the 1970s and became a pure power protection company at the end of the '90s. Chloride is now a leading power solutions and services provider and specialist.

Products Sold:

- Uninterrupted power supplies
- Line protector products
- Power conditioning equipment

(800) 327-8801 | www.chloridepower.com

PHYSICAL INFRASTRUCTURE

CYBER@SWITCHING

Cyber Switching began pioneering power distribution technologies in 1994. Our PDUs are used to power cycle and manage power to blade servers, routers, SANs, and other data center equipment. Our intelligent PDUs can monitor current individually by outlet and also provide virtual circuit breaker protection on an individual outlet basis. **No other PDU on the market offers these unique features.**

Products Sold:

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- Three-phase power distribution
- Energy management and control
- Switches
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PHYSICAL INFRASTRUCTURE

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PHYSICAL INFRASTRUCTURE

hergo

TECHNICAL WORKSPACE SOLUTIONS

Based in New York City, Hergo Ergonomic Support Systems is an independent designer and manufacturer of enclosure cabinet solutions, technical computer furniture, and modular racking systems. The company's products are designed to promote organization in the workspace and to increase the productivity of computers, peripherals, and communications equipment. Hergo is known for its high-quality products and superior customer service.

Products Sold:

- Racks
- Enclosures/cabinets
- Motorized workstations
- Flat-panel arms
- Computer desks
- Cable management
- Power management

(888) 222-7270 | www.hergo.com

PHYSICAL INFRASTRUCTURE

PDUsdirect

Established in 2008, PDUsDirect.com is an online wholesaler providing a select line of PDUs for server and networked environments. PDUs Direct's basic, metered, and switched Rack PDUs provide local and remote power management, power monitoring, and environmental monitoring. We pride ourselves in offering industrial-grade quality products at the lowest prices, with the fastest shipping (most orders shipped within 24 hours) and simplest purchase process.

Products Sold:

A complete line of 20A PDUs, including metered, basic, and switched.

(888) 751-7387 | pdusdirect.com

PHYSICAL INFRASTRUCTURE

RACKMOUNT SOLUTIONS, Ltd

where customer service matters

Rackmount Solutions' mission is to listen to the IT engineer's specific needs and deliver superb-quality, high-performance products through continuous product innovation and operational excellence. We pride ourselves in providing quality customer service, products that fit your IT requirements, and solid value for your money.

Products Sold:

- Wallmount and server racks and cabinets, including sound proof, air conditioned, and large cable bundle
- Desktop/tabletop portable racks
- Shockmount shipping cases
- Bulk cable

(866) 207-6631 | www.rackmountsolutions.net

PHYSICAL INFRASTRUCTURE

Server Technology

Solutions for the Data Center Equipment Cabinet

Server Technology is committed to the PDU market with the largest group of engineers dedicated to power distribution and other solutions within the equipment cabinet. Advancements in device power monitoring help data centers monitor and improve their efficiency, and continuous research and development is fueled by companies that look to Server Technology for their custom cabinet power solutions.

Products Sold:

A complete line of cabinet PDUs, including Per Outlet Power Sensing (POPS), Rack Mount Fail-Safe Transfer Switch, Console Port access with remote power management, Switched, Smart, Metered, Basic, and -48 VDC

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PHYSICAL INFRASTRUCTURE

TEMPERATURE@LERT

USB TEMPERATURE MONITOR WITH EMAIL ALERTS

Boston, Mass.,-based Temperature@lert manufactures products designed to be as simple as possible to provide the most reliable temperature monitoring for your IT equipment. Temperature@lert has been growing at a steady, measured pace, which allows it to exceed customer expectations in terms of product quality and support, and its customer support staff is composed only of members of its product engineering team, ensuring superior support.

Products Sold:

USB and Wi-Fi versions of the Temperature@lert device, which monitors data center temperature, alerts you to problems, and takes corrective action as needed.

(866) 524-3540 | www.24sensor.com

NETWORKING & VPN



ASD's mission is to be the best nationwide provider of design, deployment, and project management services in the voice and data network integration industry. We offer turnkey, reliable, and cost-effective communications systems tailored to fit the client. Our goal is to be the single point of contact for services to end users, systems integrators, manufacturers, building owners, and others. Our commitment includes delivering projects on time and on budget and offering superior, customized design.

Products Sold:

Voice and data network integration services, along with a line of networking-related products.

(800) CABLING (222-5464) | www.icat-its.com

STORAGE



Adaptec provides I/O solutions that protect, accelerate, optimize, and condition data. Adaptec products are used in IT environments ranging from on-demand cloud computing to traditional enterprise data centers. The company's products enable data center managers, channel partners, and OEMs to deploy storage solutions to meet their customers' evolving IT requirements. More information is available at www.adaptec.com, on its blog at storageadvisors.adaptec.com, and at adaptec.com/facebook and twitter.com/Adaptec_Inc.

Products Sold:

Data storage I/O products, including ASICs, HBAs, SATA/SAS and SCSI RAID controllers, and software for IP SANs

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STORAGE



Established in 1983, CMS Products is a leading innovator in data backup, encryption, and security technology. CMS Products has received global recognition for its work in developing leading-edge, easy-to-use products that revolutionize the notebook and desktop data backup/restore and storage industry.

Products Sold:

- Backup and restore disaster recovery software and systems, including laptop, desktop, and secure versions
- Laptop hard drive upgrades
- Data security products, including encryption software, encrypted portable backup, and encrypted flash drives

(800) 327-5773 | www.cmsproducts.com

STORAGE



Diskeeper is the undisputed innovator of technologies that enhance the performance and reliability of Windows computers. CIOs and IT managers rely on Diskeeper software to provide unparalleled performance and reliability to their business laptops, desktops, and servers. Founded in July 1981, Diskeeper is a multinational corporation with headquarters in Burbank, Calif., and corporate offices in England and Hong Kong. The Diskeeper product line is distributed globally.

Products Sold:

A line of computer and storage performance-enhancing, data protection, and data recovery products.

(818) 771-1600 | www.diskeeper.com

SERVERS



IN-WIN Development Inc., an ISO 9001 manufacturer of professional computer chassis, power supplies, and digital storage devices, is the leading provider of enclosure solutions to system integrators worldwide. Founded in 1986, IN-WIN provides high-quality chassis that conform to all safety regulations, as well as unsurpassed customer service.

Products Sold:

- Computer cases
- Server cases
- Power supplies
- Storage devices

(909) 348-0588 | www.in-win.us

CLIENTS



Maryland-based dtSearch started research and development in text retrieval in 1988. The company is known for speedy adoption of new programming standards, OSes, and file types. Plus, it has a flexible licensing model. Typical corporate use of dtSearch includes general information retrieval, Internet and intranet site searching, and email archiving and email filtering.

Products Sold:

Text retrieval products, including:

- Desktop With Spider
- Network With Spider
- Publish For CD/DVDs
- Web With Spider
- Engine For Win & .NET
- Engine For Linux

(800) 483-4637 | www.dtsearch.com

CLIENTS



Datawatch was founded in 1985 and is currently based in Chelmsford, Mass., with additional offices in London, Sydney, and Manila. Datawatch specializes in business intelligence and enterprise information management, which help simplify a business's access to and analysis of information. Datawatch transforms the massive amounts of data and documents generated inside or outside a company into actionable insight, without any changes needed to existing systems. Datawatch has helped more than 35,000 companies worldwide.

Products Sold:

Business intelligence and data visualization

(800) 445-3311 | www.datawatch.com

EQUIPMENT DEALER



IGS is an independent manufacturer and source of supply, service, and depot repair of obsolete Digital Equipment Corp. parts, products, and systems. We maintain an extensive inventory of DEC parts and equipment; some date from the 1960s. We refurbish and service these parts, adding current technology when applicable. We provide Advance Replacement Service within 24 hours if we have the item in stock and, with 75,000 stock items, chances are we will.

Products Sold:

Digital Equipment Corp. parts, products, and systems, including memory, storage, processors, display and video, printers, and cables, for repair, lease, or rental

(888) 332-7278 | www.decparts.com

EQUIPMENT DEALER



At Information Technology Trading, our goal is to help you acquire the right hardware or software solution. We specialize in purchasing and reselling data-processing equipment and have more than 21 years combined experience. We provide services and system upgrades, DASD, communication, and memory. We're also an outlet for off-lease portfolios.

Products Sold:

- AS400, Advanced System/36, R/S6000, ES/9000, and PC systems (including lease and rental)
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EQUIPMENT DEALER



In 1987, Pegasus Computer Marketing started providing mainframe products to the end-user market. What began as a sales-only organization soon adapted to offer in-house repair and refurbishment. During the past 10 years, Pegasus has focused primarily on the point-of-sale and barcode industries, buying, selling, and providing service contracts for anywhere from a few scanners to hundreds.

Products Sold:

We buy, sell, and service:

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